SYNONYMS AND AGRONYMS IN MOLECULAR- AND CELL BIOLOGY

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The number of acronyms grows rapidly and some scientific articles are full of them and complicate understanding. It is the intention of this site to grow persistently to promote a better understanding even if the selection is arbitrarily and will never be completed.

14-3-3 proteins	ubiquitous eucaryotic protein family binding to proteins involved in signal transduction, cell cycle and apoptosis. The bound proteins include Raf, CdC25, NFAT, Bad, A20, PI3-kinase, IRS-1, MEKK glucocorticoid receptor and the forkhead transcription factors. cRaf activation involves conformational changes governed by the binding of 14-3-3 proteins to phosphorylated serines (ser_{621}) in cRaf.
AAA proteins	ATPases associated with a variety of cellular activities, this protein family is characterized by a 220-225 amino acid ATPase domain that contains conserved walker A and B motifs
AANAT	arylalkylamine N-acetyltransferase, catalyzes acetyl transfer from acetyl-coenzyme A to serotonin,
ABC	ATP-binding cassette
ABD	actin-binding domain
Abd-B	Abdominal-B
ABF1	ARS binding factor 1
ABGF	autostimulatory B cell growth factor
Abl	Ableson protein tyrosine kinase
Abl	TF, contains src-homologue region,
ACE	angiotensin converting enzyme
ACE	adenylation control element;
AchR	acetylcholine receptor
ACTH	adrenocorticotropic hormone, s. POMC
Act	protein kinase, PKB,
Actin	globular (G-actin) protein forming filaments by assembling of about 200 molecules (F-actin), part of the thin filaments of muscle fibrilles, dystrophin binds to actin and connects it to dystrophin-associated glycoprotein complex (DAGP), a membran complex which is in contact to the merosin, the muscle-specific laminin isoform in the ECM
Actinin	
ActivinA	syn:EDF,
Activin-betaB	notochord factor that can repress endodermal SHH and thereby permit expression of pancreas genes including Pdx1 and insulin
ACTR	A histone acetyltransferase
AD	activation domain
AD	Alzheimer's disease
Ad	adenovirus

ADAR1	deaminase, IFN-induced, site-specific pre-mRNA editing,
ADF	actin-depolymerizing factor, syn cofilin
ADH	antidiuretic hormone, identical with vasopressin
ADH	alcohol dehydrogenase, enzyme
Ad-MLP	adenovirus major late promoter
AE-1	autoregulatory enhancer
AFX	TF, belongs to the fork head family
Aga	agglutinin
AGF	adipocyte growth factor, identical with bFGF, also: adrenal growth factor, autocrine growth factor, astroglia growth factor
Ahch	TF, syn. Dax1; involved in sex determination, gonadal differentiation and spermatogenesis,
Ahr	Aryl hydrocarbon receptor, syn. dioxin receptor,
AIF	apoptosis-inducing factor, confined to mitochondria where it colocalizes with Hsp60, After induction of apoptosis it translocates to the nucleus inducing chromatin condensation and large-scale DNA fragmentation,
AIP	Ahr-interacting protein
AIRK2	Auror/Ipl1p-related serine-threonine protein kinase, binds to the INCENP, is required for cytokinesis
AKAPs	A-kinase-anchoring proteins, contain a PKA binding domain
AKT	Cellular homolog of the v-akt oncogene, an S/T protein kinase, syn. PKB
ALK	activin receptor-like transmembrane ser/thr-kinase, 4 are known, bind ligands of the TGF- superfamily,
AMPK	AMP-activated protein kinase, heterotrimer (α,β,γ), metabolite-sensing member of protein kinases (7 are known) involved in stimulating glucose transport and beta-oxidation of fatty acids as well as in inhibiting synthesis, apoptosis and transcription, yeast homolog is Snf,
ANF	atrial natriuretic factor, hormon secreted during hypervolumie from atrial cells of the right front court, identical to ANP
Ankyrin	protein linker between the integral membrane proteins and spectrin-based cytoskeleton involved a.o. in signal transduction, isoforms

ANP	atrial natriuretic peptide, identical to ANF,
Ant	antennapedia; TF,
ANT	adenine nucleotide translocator
Anx	annexins, ubiquitous multigenic family of multifunctional, Ca- and phospholipid-binding proteins
AOX1	alcohol oxidase 1
Aop1	antioxidant protein 1, thioredoxine-dependent peroxide reductase, first described as mer5,
Aop2	family member of apo1,
AP1	activator protein 1, dimeric transcription factor is composed of members of the Fos, Jun and ATF familie of proteins
AP1,2,3	Adapter proteins containing α–,β– and μ–subunit, bind with the ß-subunit to clathrin, with the μ-subunit to a membrane protein containing a YXX-motif and with the α-subunit to four different proteins with DPF/W domains: epsin, AP180, Eps15 and amphiphysin, which are interacting with proteins harboring a SH3 domain: intersectin, endophilin, syndapin.
APA	aster promoting activity, protein complex containing NuMA
APAF	Apoptotic protease activating factor
APC	Anaphase promoting complex/cyclosome, ubiquitin ligase mediating cyclin proteolysis inactivating CDKs, activity under control of Cdc20, APC further ubiquitinylates Esp1-bound Pds1, so that Esp1 becomes active and cleaves Scc1 of cohesin which promotes sister-chromatid separation during anaphase
APC	adenomatous polyposis coli, tumor suppressor protein involved in signaling activating a.o. transcription of c-myc, protein kinase, inactivated by phosphorylation through GSK-3, APC contains a nuclear export signal
APC	antigene presenting cell
ApoE	apolipoprotein E
Apoptosis	programmed cell death
APP	amyloid ß precursor protein
APP	acute phase proteins
APPIF	acute phase protein inducing factor

APV	anterior periventricular nucleus
AQP	aquaporin, water channel
AR	androgen receptor,
ARC	activator-recruited cofactor
ARD	Armadillo repeat domain
ARE	AU-rich element
ARF	ATP-ribosylation-factor, binding of GTP leads to unmasking of a myristine moiety which anchorses ARF into the membrane, regulates assembly and disassembly of the coatomer proteins COPI
ARID	AT-rich interaction domain, found in a family of mostly DNA-binding proteins f.e. Bright, MRF-1,2, DRI
ARM	arginine rich motif in Tat, interacting with TAR, which forms a highly-affine loop-structure,
ARNO	ADP-ribosylation factor
Arnt	AhR nuclear translocator
Aryl	hydrocarbon receptor nuclear translocator
Arps	actin related proteins, in S.c. arp1 - 10
Arp1	actin related protein 1; interacts with the p62 subunit of dynactin, a multisubunit complex;
Arp2/3	actin related proteins 2,3; both in complex enhance actin nucleation and causes branching and crosslinking of actin filaments in vitro,
AQP	aquaporin, syn. CHIP28, Integral membrane protein (28 kD) with six trans-membrane domains that greatly increases water permeability. Found esp. in kidney, red blood cells. AQP1 forms a homotetramer of four independent channels.
ARS	autonomously replicating sequence,
Artemis	protein involved in DNA double-strand break repair and V(D)J recombination, mutated in SCID
ASC	antibody secreting cell
AS-C	achaete-scute, Drosophila transcription factors that promote neural precursor formation,
Asef	APC-stimulated guanine nucleotide exchange factor,
ASH1	AS-C homologue
ASK	Apoptosis signal-regulating kinase
AT	ataxia-telangiectasia, genetic disorder characterised by immunodeficiency, progressive cerebellar ataxia, radiosensitivity, cell cycle checkpoint defects and cancer predisposition.
ATF-1	activating transcription factor 1, TREB36
ATF-2	activating transcription factor 2, CRE-BP1, CREB2

ATM	AT- (Ataxia telangiectasia)-mutated, gene encoding a serin kinase containing a Pl- 3 kinase like domain, a proline-rich region and a leucine zipper. The proline-rich regions binds to the SH3 domain of c-Abl wich facilitates its phosphorylation by ATM. ATM interacts with and phosphorylates p53 on Ser15 and BRCA
ATR	ATM-Rad3-related-protein, regulates Ser15 phosphorylation of p53 in DNA-damaged cells
AUBF	adenosine-uridine binding factor
Auxilin	protein involved in the transport of synaptic velicles
BAC	Bacterial artificial chromosome, a vector used to clone DNA fragments (100- to 300-kb insert size; average, 150 kb) in *Escherichia coli* cells. Based on naturally occurring F-factor plasmid found in the bacterium *E. coli*.
BAC library	bacterial artificial chromosome library, Library constructed in a vector with an origin of replication that allows its propagation in bacteria as an extra chromosome
BACH1	helicase-like protein of the DEAH helicase family, interacts with BRCA1 by binding to the BRCT repeats,
Bad	member of the Bcl2 family, binds Bcl accelerating apoptosis
BAF	BRG1-associated factor
Bak	member of the Bcl2 family, involved in regulation of apoptosis like Bax, downregulated by ras
BARD	BRCA1-associated RING domain protein, interacts with BRCA1,
Bax	protein, heterodimerization with bcl-2 promotes release of cytochrome c from mitochondria and thus supporting apoptosis, Bax and Bak acting via opening of VDAC,
BBF-2	TF
BCC	Basal Cell Carcinoma
BCD	Bicoid, TF,
bcl	B cell leukemia oncogene
bcl-2	B cell lymphoma/leukemia 2, protein located in the inner mitochondria and other membranes, counteracts apoptosis by preventing cyt c release closing VDACs, dimer formation with bax
BCL-6	B cell lymphoma-6, POZ/zinc finger transcriptional repressor required for germinal center formation
Bcl10	CARD-containing protein, positive regulator of antigene receptor-induced activation of NF-κB
BcoR	BCL-6 interacting corepressor, interacting with HDAC's

BER	base excision repair
Beta-2	TF, homologue to NeuroD,
BFA1/BUB2	heterotrimeric GTPase-activating protein that inhibits cyclin B degradation by keeping the G protein Tem 1 inactive
bFGF	basic fibroblast growth factor; see AGF
BGF	bone growth factor,
BHK	baby hamster kidney, cell line
bHLH	basic helix-loop-helix,
BicD	bicaudal D
Bik2p	bilateral karyogamy defect protein, microtuble associated protein required for assembly,
BiP	yeast chaperone, homologue to Kar2p
bithorax	homeotic TF,
BMP	bone morphogenetic protein
Bmal1	brain and muscle Arnt-like protein 1
Bp	base pair
BPTI	bovine pancreatic trypsin inhibitor

Boss	bridge of sevenless
bradykinin	
BRCA1,2	breast cancer, two nuclear proteins, phosphorylated by ATM and subsequently involved in DNA repair,
Brat	Brain tumour, member of the RBCC-NHL class of proteins, required to regulate hb in early embryos and is recruited to the repression complex via contacts with both Pum and Nos,
BRE	Bruno response element
BRG1	hATPase, together with hBRM homologous to SWI/SNF, cooperates with Rb to block activation of E2F-1,
Bright	B-cell regulator if IgH transcription
BSA	bovine serum albumin
BTA	basal transcription apparatus
BTC	betacellulin; EGFR-ligand,
Btk	Bruton's tyrosine kinase, essential for normal B-cell receptor signalling
BWS	Beckwith-Wiedemann syndrome
CAAT-Box	cis-element, binds C/EBP
CAB	centrosome-attracting body
CAC	cadherin-associated complex
c-Act	see PKB
CAD	caspase-activated deoxyribonuclease
Cadherin	family of integral membrane proteins, responsible for Ca-dependent cell adhesion
cADPR	Cyclic ADP-ribose, important intracellular Ca2+ releasing messenger
CAF-1	chromatin assembly factor
CAK	CDK-activating kinase, enzyme activity of TFIIH phosphorylating CTD
Calreticulin	highly conserved eukaryotic ubiquitious protein located mainly in the ER, chaperone activity and lectin properties
CAM	Cell adhesion molecule
CaM	calmodulin, a Ca^{2+}-binding protein, heatstable,
CaMK	Ca2+/CaM-dependent protein kinase
CaMKK	CaMK kinase
CAP	Cbl adapter protein, Cbl is recruited to the insulin receptor by interaction with SH3 domains of CAP, upon phosphorylation of Cbl, the CAP-Cbl complex dissociates from the receptor and moves to a caveolin-enriched, triton-insoluble membrane fraction
CAR	coxsackievirus and adenovirus receptor
Cas	Crk-associated substrate, p130CAS
CASP's	CTD-associated SR-similar proteins, containing an Arg, Ser-Diamino acid-motif, a CTD-interacting-domain and a RNA-recognition-domain (CASP1 to CASP10 known)
Caspases	Cysteinyl aspartate-specific proteinases (1-10), promote apoptosis, activated by TNF (caspase-2) and Fas-ligands (caspases-8, -10), ICE is the old name for caspase-1,

CAK	CDK-activating kinase; phosphorylates CDK's, which itself are regulating the cell cycle
CaLB	calcium-dependent lipid binding, domain of PLA
CAP	catabolite activator protein
Cap	structure of the 5'-end of the mRNA, posttrancriptional modification, binding site for CBC,
CAP	cyclase-associated protein, controls spatial distribution of actin filaments and mRNA determinants
CAPK	ceramide-dependent protein kinase, identical to KSR
CAPP	ceramide-dependent protein phosphatase
CARD	caspases recruiting domain
CAT	chloramphenicol acetyl transferase
CBP	CREB binding protein, highly related to p300, transcriptional coactivator, histone acetyltransferase,
CBC	cap binding complex, consisting of two cap binding proteins (CBP) 80 and 20, CBC mediates binding of karyopherin to the cap-structure of the mRNA and translocates it to the cytoplasm
CBF	core binding factor, heterodimeric transcription factors comprised of AML/CBFA/PEBP2α/Runx and CBFβ/PEBP2β subunits,
Cbl	insulin receptor substrate,
CBP	CREB-binding protein, transcriptional cofactor with histon acetyltransferase (HAT) activity, acetylates a.o. GATA-1 at two conserved lys-rich motifs, acetylates histones,
CBP	cap-binding protein
CCK	Cholecystokinine
Ccna1, 2	genes encoding for cyclin A1 and A2,
CCV	clathrin-coated vesicle
CD	cluster of differentiation/determinants, cell surface antigenes, more than 125 known (CD1-CD126)
CDC	cell division cycle
CDC2	cell division cycle protein 2, CDK1
CDC25c	cell division cycle protein 25c, M-phase inducer phosphatase
CDC34	cell division cycle protein 34, an E2 ubiquitin conjugating enzyme
CDC42	cell division cycle protein 42, a G protein
CDC25A	phosphatase required for progression from G1 to S phase,
CDH	cadherin
CDK	cyclin dependent kinase
CDKI	CDK-inhibitors, inhibit the progression of the cell cycle predominantly at the G1 phase, classI: p16 (syn.: MTS1, INK4a) p15 (syn.: MTS2, INK4b), p18, p19, classII: p21 (syn.: WAF1, CIP1, SDI1, CAP20), p27 (syn.: KIP1) and p57 (KIP2)
cDNA	complementary DNA, DNA that is synthesized from a messenger RNA template; the single-stranded form is often used as a probe in physical mapping.

C/EBP	CCAAT/enhancer binding protein
CED	proteins of Caenorhabtitis elegans involved in apotosis
CED-1	cell surface phagocytic receptor
CETP	cholesterol ester transfer protein, mediates exchange of cholesterol in HDL for triglycerides in VLDL
CF	Cystic Fibrosis
CF I, II	cleavage factors, cleave mRNA 3'-end,
CFC	colony forming cells
CFTR	cystic fibrosis transmembrane conductance regulatory, cAMP-regulated chloride channel, membrane protein in mucosa cells, controls water content in mucins
CFU	colony forming unit
CGRP	Calcitonin Gene Related Peptide, splice variant of the calcitonin transcript in the hypothalamus, vasodilating,
Chaperonin	
Chd	Chordin, BMP-binding protein,
Chk1	yeast checkpoint kinase, mediator of cell cycle arrest, phosphorylated in response to DNA damage, activates p53,
CHO	chinese hamster ovary, cell line,
CHOP	C/EBP homologous protein
Ci	cubitus interruptus, dTF, elaborates the development program directed by the morphogen Hh
CID	chemical inducer of dimerization
Cip	Cdk-interactin protein
cip1	syn. p21
CIS	Cytokine inducible SH2-containing protein
CK1	Casein kinase 1
CKI	cyclin-dependent kinase inhibitor, Two classes of CKIs are known in mammals, the p21 $^{CIP1/Waf1}$ class that includes p27 ^{KIP1} and p57^{KIP2} and that inhibit all G1/S cyclin-dependent kinases (cdks), and the p16 ^{INK4} class that bind and inhibit only Cdk4 and Cdk6. The p21 ^{CIP1} inhibitor is transcriptionallyregulated by p53 tumour suppressor, is important in G1 DNA-damage checkpoint,
CLIM	cofactor of LIM homeodomain proteins
CL-100	MAPK phosphatase
CM	centimorgan, a unit of measure of recombination frequency. One centimorgan is equal to a 1% chance that a marker at one genetic locus will be separated from a marker at a second locus due to crossing over in a single generation. In human beings, one centimorgan is equivalent, on average, to one million base pairs.
CMT	cytolysin-mediated translocation
c-Myb	Cellular homolog of the avain myeloblastosis virus oncogene
Cnc	TF,
CNS	central nervous system
Cofilin	syn. for ADF

cohesin	multisubunit complex holding sister chromatides together, composed of Scc1, Scc3; Smc1 and Smc3, destroyed during anaphase by Scc1-cleavage catalysed by the separinase Esp1
Contig	Group of cloned (copied) pieces of DNA representing overlapping regions of a particular chromosome.
Contig map	A map depicting the relative order of a linked library of small overlapping clones representing a complete chromosomal segment
Connexin	membrane proteins containing four transmembrane domains, in mammals they are encoded by a family of at least 15 genes, 6 molecules of connexin are forming a channel, gap-junctions
COP	coat protein
Cosmid	artificially constructed cloning vector containing the cos gene of phage lambda. Cosmids can be packaged in lambda phage particles for infection into *E. coli*; this permits cloning of larger DNA fragments (up to 45kb) than can be introduced into bacterial hosts in plasmid vectors.
COX	cyclo-oxygenase
CPC1	TF
CPE	cytoplasmic polyadenylation element
CPEB	CPE-binding protein
CPHD	combined pituitary hormone deficiency
CPSF	cleavage and polyadenylation stimulation factor, tetrameric protein (30, 73, 100, 160 kDa), 160SU binds to AAUAAA,
CPX	complexin, involved in regulation of neurotransmitter release
CRABP-1	cellular retinoic acid-binding protein 1
CRAC	cytosolic regulator of adenylyl cyclase, contains pleckstrin homology domains, interaction with the γ–subunit of the stimulated trimeric G-proteins leads to translocation of CRAC from the cytoplasm to the plasma membrane,
c-Raf	Raf proto-oncogene S/T protein kinase
CRD	carbohydrate recognition domain
CRE	cAMP-response element , bindingsite for CREB
CREB	CRE-binding protein, is phosphorylated on Ser-119 (133) by PKA, interacts with p300/CBP, which contains histone acetylase
CREB	cAMP-response element binding protein
CREM	TF, CRE modulator, phosphorylated on Ser-117 by PKA
CRF	corticotropin-releasing factor
CRFR1	CRF-receptor,

CRG	cytokine response genes,
CRH	corticotropin-releasing hormone
CRIB	Cdc42/Rac interactive binding (motif)
Crk	SH2/SH3-adaptor protein
Crm1	Exportin, receptor for proteins with NES
CRD	cysteine rich domain
CRP1	
CRS	cytoplasmic retension sequence
CRSP	cofactor required for SP1 activation, complex (700 kD) of nine proteins (33-200kD)
CsA	Cyclosporin A
CSF-1	colony-stimulating factor, identical with M-CSF
CSL	CBF1/Su(H)/LAG-1, DNA-binding proteins interacting with NICD
CSP	calcium sensor protein
Csp	cold-shock protein
CSPS	cysteine-string proteins, vesicle proteins involved in neurotransmission, contains four domains, the j-domain interacts with the chaperone Hsp 70
CstF	Cleavage stimulation factor, trimeric protein (77, 50, 64 kdDa) involved in 3'-cleavage of pre-mRNA, p64 binds to the GU-rich poly(A)site, p77 to the RNA-polymeraseII,
CtBP	carboxy-terminal binding protein
CTCF	ubiquitous repressor of transcription
CTD	Carboy Terminal Domain of the RNA-polymerase II; the human CTD contains c-terminal 52x the heptapeptide Tyr-Ser-Pro-Thr-Ser-Pro-Ser , which is phosphorylated by TFIIH (CAK) leading to promoter clearance and binds CASP's
CTL	cytotoxic T lymphocyte
Cubilin	intestinal recepter for intrinsic factor-vitamin B_{12}
CX	connexins, syn. GJB (gap junction protein), multigenetic family of 13 polytopic membrane proteins, connexins assemble by hexameric oligomerization to hemichannels (connexons) which dock with identical (homotypic) or compatible (heterotypic) connexons in adjacent cells to form channnels with selective properties, gap junctions,
Dab1	F, disabled; ensures together with reln correct neuronal positioning during brain development
DAF-16	TF, homologue to FKHR
DAG	diacylglycerol
DAPC	dystrophin-associated protein complex, connects the cytoskeleton to the ECM via its binding to actin filaments
DAP kinase	death associated protein kinase, Ser/Thr-kinase
Dax1	s. Ahch
Daxx	Fas death domain-associated protein

DBD	DNA binding domain
DB	Downstream box
DCC	Deleted in colorectal cancer, netrin receptor
DD	Death domain
Del1	developmental endothelial locus-1
DED	death effector domain
DEG/ENaC	degenerin/epithelial soium channel
DER	Drosophila epidermal growth factor receptor
DF	differentiation factor, identical with G-CSF,
DFF	syn. CAD,
DFP	diisopropylfluorphosphate, inhibitor of acetylcholin esterase, phosphorylates a ser within the active center
DHFR	Dihydrofolatreduktase, Enzyme
DIF	differentiation-inhibiting factor, identical with TGF-β,
DISC	death inducing signalling complex
DKK	Dickkopf
Dlk	DAP-like kinase, Ser/Thr-kinase,
dlk	delta-like protein
Dlx3	Distal-less, homeodomain TF
D.m.	Diabetes mellitus, s. IDDM, NIDDM
DM	myotonic dystrophy, multisystemic disease,
DMAHP	DM-associated homeodomain protein
DMD	Duchenne Muscular Dystrophy
DMPK	myotonic dystrophy protein kinase
DNA	(deoxyribonucleic acid) The molecule that encodes genetic information. DNA is a doublestranded molecule held together by weak bonds between base pairs of nucleotides. The four nucleotides in DNA contain the. bases: adenine (A), guanine (G), cytosine (C), and thymine (T). In nature, base pairs form only between A and T and between G and C; thus the base sequence of each single strand can be deduced from that of its partner.
DNA-PK	DNA-activated protein kinase
DNase	desoxyribonuclease
DNMT	de novo methyltransferase
DP-1	member of the E2F transcription factor family
DPC4	deleted in pancreatic cancer locus 4, SMAD4
DPE	downstream promoter element
Dpp	decapentaplegic, fly ortholog of BMP-2/4,
DPY	dumpy
DR1	TFIID repressor 1
DR3	death receptor 3

DRE	downstream regulatory element
DREAM	DRE-antagonist modulator, binds as transcriptional repressor to DRE, contains 4 binding sites for Calcium, Calcium binding lowers its affinity to DRE,
DRI	dead ringer, dTF
DRIP	vitamin D receptor-interacting protein
DRK	downstream receptor kinase
Drok	drosophila Rho-associated kinase
DSB	double strand break, backbone break through both strands of the DNA duplex
DSCAM	Down syndrome cell adhesion molecule
DSE	
Dsh	dishevelled
DSL	Delta/Serrate/Lag2, cell-bond ligands recognised by the Notch receptor
Dsor1	downstream suppressor of raf 1,
dsRBP	double-stranded RNA-binding proteins like PKR, TRBP, E3L, RHA, ADAR1 a.o.
dsRNA	double-stranded RNA,
Duox	dual oxidase, homolog to gp91phox
dynamin	GTPase, plays essential role in clathrin-mediated endocytosis, the PH domain interacts with phosphoinositides
dynein	microtubule motor,
dynactin	complex structure (11 subunits) essential for dynein function
Dvl	dishevelled, protein involved in signal pathways from frizzled
EAE	experimental autoimmune encephalomyelitis
E2F	TF, potent regulator of cell cycle check point, forms with DP1 a heterodimeric transcription factor,
E3L	viral PKR inhibitor
EBF	early B-cell factor
EBP	enhancer binding protein
EBP50	ERM-binding phosphoprotein 50kDa
EC	cadherin-like ectodomain
EC	endothelial cell
E-cadherin	epithelial cadherin
ECE	endothelin-converting enzyme
ECH	TF
ECM	ectracellular matrix
ECSA	erythroid colony-stimulating activity; syn. for Epo
EDCF	endothelium-derived contracting factor, syn. ET
EDF	erythroid differentiation factor
eEF	eukaryotic elongation factor

EA1	early endosome antigen 1
EF1	enhancing factor 1
EGF	epidermal growth factor
EGFR	EGF receptor
Egr-1	early growth factor response gene 1 product, zinc-finger TF,
eIF4A	form a trimeric complex with 4E and 4G, containing helicase activity to remove secondary structures from the 5'-end of mRNA
eIF4E	eucaryotic initiation factor 4E, binds mRNA-cap-structure and is bound by PhasI from where it is released by phosphorylation of Phas by mTOR which is activated by insulin signalling
eIF4F	eucaryotic initiation factor of translation, complex of eIF4A+E+G,
eIF4G	eucaryotic initiation factor 4G, bound by Hsp27,
EL cells	E-cadherin expressing L cells
ELISA	enzyme-linked immunosorbent assay
ELK1	Ets domain protein
ELK-1	SRF accessory factor, contains a growth factor-regulated transcriptional activation domain
EMBL	European Mol.Bio.Lab.
EMSA	electrophoretic mobility shift assay
Engrailed	homeotic TF, germ: eingekerbt,
eNos	endothelial nitric oxide syntase, NOS-3
EPAS1	endothelial PAS domain protein 1
EPF	early pregnancy factor
Eph	Ephrin receptor, contain TK
EphrinB2	transmembrane ligand, required for vascular morphogenesis
Epo	erythropoietin, syn: ECSA, ESF, peptide hormone synthesised in the kindney and to a lesser extent in hepatocytes, is induced by anemia, hypoxemia; stimulates erythropoiesis via EpoR, recepter binding induces dimerization leading to autophosphorylation, activation of JAK-2, activation of TF Stat5, Ras, PI3K a.o.
EPO	eosinophil peroxidase
EpoR	erythropoietin receptor,

ER	estrogen receptor
ER	endoplasmatic reticulum
Erb	oncogene, receptor,
ERCC3	subunit of TFIIH, DNA helicase responsible for adenosine triphosphate-dependent promoter melting
ERF	Ets-2 repressor factor
ERG	early response genes,
ERK1	extracellular-signal related/regulated kinase, ser/thr-kinase, identical with MAPK,
ERM	ezrin-radixin-moesin
ERO1	endoplasmic reticulum oxidoreductin 1,
ES	embryonic stem cells, pluripotent cells derived from the inner cell masses of normal late blastocysts,
ESF	erythropoisis stimulating factor, identical with Epo,
Esp1	separin protease, cleaves Scc1 destroying cohesin which promotes separation of siter-chromatides during anaphase
ESTs	Expressed sequence tags
ET-1,2,3	endothelin-1,-2,-3; 21 amino acid peptides, acting on related G-protein coupled receptors activating PLC, PKC; potent vasoconstrictors, syn.EDCF
Eta-1	osteopontin, cytokine involved in cell-mediated immunity
ETF	EGFR-specific TF,
ets	oncogenes,
Even-skipped	TF
Evi-1	oncoprotein, represses TGF-ß signalling by inhibiting Smad3
FABP	fatty acid-binding protein
FACT	fascilitates chromatin transcription
FADD	Fas-associated death domain protein, TRADD-binding protein
FAK	focal adhesion kinase
FAN	factor activating nSMase,
FAP	familial adenomatous polyposis
FAS	syn: CD95; TNFR1; member of TNF-R family, ligand binding recruits an adapter molecule, FADD, leading downstream to caspase activating
FasL	Fas-Ligand binding to Fas, sFasL can be sheded through the action of proteases
FCC	fly cadherin box
FCS	fetal calf serum
FCM	flow cytometry
FGF	fibroblast growth factors, protein family
FISH	fluorescence in situ hybridization A physical mapping approach that uses fluorescein tags to detect hybridization of probes with metaphase chromosomes and with the less condensed somatic interphase chromatin.

FK506	macrolide compound, biological activity like cyclosporin
FKBP	FK506 binding protein, syn.Cyclophilin
FKH	TF, forkhead family of winged helix transcriptional regulators involved in embryogenesis,
FKHR	TF, forkhead/winged helix protein, binds to the IRE T(A/G)TTT and confers insulin inhibition on the promotor of G-6-Pase, IGFBP-1, PEPCK, TAT; contains three PKB sites, phosphorylation by PKB promotes nuclear exclusion, homologue to dDaf-16 forkhead in rhabdomyosarcoma
FLICE	FADD-like ICE, syn. Caspase 8
FLIP	FLICE-like inhibitory protein, Caspase-8 inhibitor, interacts with TNF-receptor associated factors,
FMR1	fragile X mental retardation,
FN	fibronectin
Fms	transmembran peptide receptor (ligand is M-CSF) containing tyrosine-specific kinase in its cytoplasmic domain
FOG	friend of GATA, cofactor in differentiation,
Fos	immediate early response gene, TF, SRF-induced,
Fox	forkhead box, family of winged helix/forkhead TF family, characterised by a 100-amino acid, monomeric DNA-binding domain, f.e. HNF3, FKHR
FSH	follicle-stimulating hormone
FTOC	fetal thymic organ culture
Ftz	fushi tarazu, homeotic TF,
Fra-1,-2	TF,
FRAP	FKBP12-rapamycin-associated protein
Frat-1	frequently rearranged in advanced T-cell lymphomas, is antagonistic to wnt signaling by binding to GSK3β
FRS2	FGF receptor stimulated, lipid-anchored Grb2 binding protein
FSH	follicle-stimulating hormone, promotes histone H3 phosphorylation on Ser-10
FSHD	facioscapulohumeral muscular dystrophy
Fyb	FynT-binding protein
Fyn	non-receptor cytoplasmic tyrosine kinase of the src family
FynT	T-cell-specific isoform of the src-family kinase fyn
Gab1	Grb2-associated binder 1, insulin receptor substrate,
Gab2	Grb2-associated binder 2,
GAD	glutamic acid decarboxylase, autoantigene in IDDM,
GADD45	growth arrest and DNA damage protein 45
GAF	gamma interferon activated factor
Galectin-1	ß-galactoside binding lectin, promotes axonal regeneration
GAP	GTPase activating protein
GAP	glyceraldehyde-3-phosphate dehydrogenase
Gap-junction	see connexin
GAS	IFN activating sequence

GATA	zinc-finger TF's regulating erythroid-expressed genes in maturating erythroblasts, GATA1-GATA4
GBP	guanylate binding protein
GBP	GSK3β binding protein
GCK	germinal center kinase
GCN2	general control of amino acid biosynthesis protein 2, a S/T kinase
GCN4	
GCN5	transcriptional coactivator, histone deacetylase
GCR	G-protein-coupled receptors
G-CSF	granulocyte colony stimulating factor
Gdf11	growth/differentiation factor 11
GDI	GDP-dissociation inhibitor
GEF	Guanine nucleotide exchange factors
GFP	green fluorescent protein
GGF	glial growth factor
GH	growth hormone
GHR	glucocorticoid hormone receptor,
GIP	Glucose-dependent insulinotropic polypeptide, plays an important role in stimulating insulin release in the pancreas as well as inhibiting gastric acid secretion in the stomach
GK	glucokinase; substrate specific hexokinase,
GLP	Glucagon-like peptide-1, enhances insulin biosynthesis and secretion as well as transcription of the insulin, GLUT2, glucokinase and Pdx1 genes
GM-CSF	granulocyte-macrophage colony-stimulating factor, growth factor from T-cells and macrophages binding to membrane receptors mainly on myeloid and endothelial cells
GMP1	see SUMO-1
GNATs	Gcn5-related N-acetyltransferases
GNRP	see GRF
Glut1-7	glucose transporter , seven membrane proteins transporting glucose and fructose
GLP-1,-2	glucagon-like peptide 1 and 2, produced in enteroendocrine L cells, regulators of insulin secretion and intestinal growth,
gp91phox	catalytic moiety of the phagocyte NADPH-oxidase, a plasma membrane-associated flavo-hemoprotein complex containing one FAD and two hemes that catalyses the reduction of oxygen to form superoxid, homologs: Mox1, Nox, Duox

GPC	glycophorin C
GPI	glycosyl-phosphatidylinositol,
GPCR	G-protein-coupled receptors
Grb2	growth factor receptor-bound protein 2, grb1-7, SH2/SH3-adaptor protein
GR	glucocorticoid receptor
GRE	glucocorticoid response element, binding site for steroid hormone/receptor complexes,
GRF	guanine nucleotide releasing factor, syn. GNRP
GRF	growth hormone releasing factor
GRIP	glucocorticoid receptor-interacting protein, a histone acetyltransferase
GRK	G-protein-coupled receptor kinase
GRP	gastrin-releasing peptide
GSH	reduced form of glutathione
Gsk-3	glycogen synthase kinase 3, phosphorylates APC, ß-catenin, Tau; is inactivated by phosphorylation
GSSG	oxidized form of glutathione,
GST	gluthatione S-transferase,
GSU	glycoprotein subunit
GTF	General transcription faktor
Gus	Glucuronidase
ICK1	Inhibitor of cyclin-dependent kinase identified in Arabidopsis, has some limited similarity with mammalian p27Kip1 kinase inhibitor,
Ikaros	sequence-specific DNA-binding protein regulating the development of mature lymphocytes from multipotent stem cell progenitors
INHAT	inhibitor of acetyltransferases, inhibits HAT activity of p300/CBP and PCAF by binding to histones
HAC1	TF,
Hairy	TF
HAT	histone acetyltransferase, enzyme activity of transcriptional coactivators like CBP/p300, SAGA (Gcn5p), PCAF, TAF_{II} 250.
HAV	His–Ala–Val
HBP	heme binding protein
HCF	host-cell factor
HDAC	histone deacetylase, enzyme activity of transcriptional corepressor like mSin3, NuRD
HD	homeodomain
HDL	high density lipoprotein
HES1	TF, hairy and enhancer- of- split 1
HGF	hepatocyte growth factor
HGP	Human Genome Project
Hh	hedgehog, a morphogen that patterns the growth and development of vertebrates and invertebrates

HIF-1	hypoxia-inducible factor, TF, consists of HIF-1α and Arnt, activation of transcription after recruitment of p300/CBP which is bound to p35srj,
HIV	human immunodeficiency virus
HLA	human leukocyte antigen
HMG	high mobility group proteins
HMP	humpback
HMR	hammerhead
HNF1-3	TF, hepatocyte nuclear factors,
hnRNP	heterogenous nuclear ribonucleoprotein
Homeotic genes	TF's identified by mutations causing aberrant segment development or one body structure to be replaced by a different one in drosophila m. Family of proteins containing a highly conserved homeo domain (about 60 amino acid) for sequence-specific DNA-binding,
HP1	heterocromatin protein 1
HPK	hematopoietic progenitor kinase
HRE	hypoxia-response element
HRG	Heregulin
HRI	hemin-regulated inhibitor, a S/T kinase
1HS	one-hybrid system
2HS	two hybrid system
3HS	three hybrid system
HAS	human serum albumin
HSC	hematopoietic stem cell
HSF	heat shock factor
Hsp	heat shock protein
Hsp27	heat shock protein 27, chaperone, inhibits translation during heat shock by binding eIF4G and fascilitating dissociation of cap-initiation complexes
Hsp90	family of proteins, consisting of Hsp90 α and β , Grp94, Trap-1, molecular chaperones, interacting with numerous signaling proteins as ligand-dependent and -independent transcription factors as well as numerous kinases like Raf1, v-src, Cdk4, wee1, casein kinase II, eIF-2α kinase,

HSPG	heparan sulfate proteoglycans
HUGO	Human Genome Organisation
IAP	integrin-associated protein
IAP	inhibitor of apoptosis protein family, syn. survivin
ICAD	inhibitor of CAD
ICAM	intracellular adhesion molecule
ICAT	β-catenin-interacting protein, regulates negatively Wnt signaling by inhibiting the interaction of β-catenin with TCF-4 which represses ß-catenin-TCF-4-mediated transactivation,
ICE	IL-1β converting enzyme, syn. for caspase-1
ICER	TF, inducible cAMP early repressor,
IDDM	insulin dependent D.m.
IF	intermediate filament
IFN	interferon,
Ig	immunoglobulin
IGF	insulin like growth factor, mainly produced in hepatocytes, IGF-1, -2,
IGF1R	IGF1 receptor
IGF-BP	IGF-binding proteins,
IHF	integration host factor
IkB	inhibitor of NFkB
IKK	IκB kinase, α and β, catalyses the transfer of phosphate moieties from ATP to IκB, which is subsequently degraded and releases NF-κB, a TF, target of aspirin and salicylate
IL	interleukin, IL1-IL20 are known, cytokines,
ILK	integrin-linked kinase
Importin	syn. karoypherin, 2 SU, αSU binds to the nls, the ß-SU mediates contact to the NPC (proteine transport into the nucleus)
Inp	ice-nucleating protein
ILK	integrin-linked kinase
INCENP	inner centromere protein, binds to AIRK2, involved in mitotic events,
INK4	inhibitor of CDK 4
INRS	Insulin recepter substrat; interacting with phosphotyrosine of the insulin receptor and is phosphorylated itself by the TRK and is interacting with different proteins
IP3	Inositoltriphosphat; second mesenger, formed together with DAG from Phosphatidylinositoldiphosphat by PLC,
IPTG	isopropyl-D-1-thiogalactopyranoside, arificial substrate used to detect β-galactosidase activity
IR	insulin receptor, heterotetrameric ($\alpha_2\beta_2$) membrane tyrosine kinase
IRAK	IL-1 receptor activating kinase,
IRE	insulin response element
IRE	iron response element
Ire1p	transmembrane kinase of the ER, binds with its lumenal domain the chaperone Kar2p which is released by

	increased stress, Kar2p release leads to self-association and activation of Ire1p,
IRES	internal ribosome entry site, mRNA sequence elements, recruiting cell cycle-dependent ribosomes to mRNA,
IRF-1	interferon-regulatory factor 1, TF,
IRP	iron regulatory protein
IRS	insulin receptor substrate
IRS	interferon response sequence
IRU	insulin response unit, DNA-sequence targeted by insulin signaling
ISRE	interferon-stimulating response element
ITAM	immunoreceptor tyrosine-based activation motif
HES-1	hairy enhancer of split,
HSF	TF, heat shock factor
HB	Hunchback, TF, controlled translationally by Pum, Nos and Brat, trans-acting factors binding to targets in the 3'-UTR
IFN	interferon, a cytokine
IPF1	insulin promoter factor 1, syn: Pdx1
JAK	just another kinase, janus kinase, a receptor associated protein with two kinase activities; phosphorylates ligand induced the receptor as well as STAT; signalpathway of cytokines, JAK1, JAK2, JAK3, Tyk2,
JIP	JNK interacting protein, group of proteins
JNK	c-Jun N-terminal kinase, ser/thr-kinase, phosphorylates the amino terminal domain of the Jun TF, stress activated, syn. SAPK, regulates AP-1 transcription activity by phosphorylation of c-Jun at Ser-63 and Ser-73 or other AP-1 proteins like JunB, JunD and ATF2, JNK is activated by two dual-specifity protein kinases MKK4 (SEK1) and MKK7 on Thr and Tyr
JNKK	JNK kinase
jun	oncogene, japanese ju-nana for 17, isolated from avian sarcoma virus 17, gene encodes for TF AP-1 recognizing TGACTCA, forms homodimers and with junD, junB and fos heterodimers,
Kallidin	identical with bradykinin
Kar2p	homologue to yeast BiP,
Kb	kilobase
KIF1A	kinesin-related motor
KLPs	kinesin-like proteins
KRC	κB binding and recognition component of the V(D)J recombination signal sequence (RSS), Zn-finger protein,
KRPs	kinesin-related proteins
Krüppel	TF
KSR	kinase suppressor of RAS
LBP	LPS-binding protein
LBR	Lamin B receptor
L1CAM	Neuronales Adhäsionsmolekül
LC8	dynein light chain, cytoplasmic

Lck	T-cell-specific tyrosine kinase of the src-family
LDH	L-lactate dehydrogenase
LDL	low density lipoprotein
LEF-1	lymphocyte enhancer-binding factor-1
Leptin	hormon, produced by fat cells acting on hypothalamic receptors repressing the feeling of hunger
LFB1	
LG domain	laminin globular domain
LH	luteinizing hormone
LPA	closes gap-junction via src activation. Src phosphorylates connexin on Tyr265
LPD	ligand binding domain
LPS	lipopolysaccharide, toxic component of bacterial cell walls,
LRF-1	TF,
LRP	LDL receptor-related protein
LTBP	latent TGF-binding protein
M 3/6	a dual specificity phosphotase
m26	founder cell of muscle 26
mAB	monoclonal antibody
Mad	mothers against dpp, first member of the protein family SMAD,
MADS	MCM1-agamous-deficiens-serum response factor
Maf	TF,
MAGUK	membrane-associated guanylate kinase, protein family
MALDI-TOF-MS	matrix assisted laser desorption/ionization time-of-flight mass spectrometry
MAP	microtubule-associated proteins
MAP	mitogen-activated protein,
MAPK	mitogen-activated protein kinase; syn. ERK, JNK/SAPK, CSBP, Mxi2, p38RK/HOG1 ident. to p38/SAPK2,
MAPKAPK2	MAP-kinase- activated protein kinase 2
MAPKK	MAPK kinase, syn.: MKK1-6, MEK, SEK1-2,
MAPKKK	MAPKK kinase, syn.: raf, mos, tpl-2, MEKK1,2,
MARKs	Microtubule-associated regulatory kinases
MAT	mating type locus
Mb	megabase
MBP	maltose-binding protein
Matrilysin	metalloproteinase, generates soluble FasL
MCK	muscle creatine kinase
MCM	mini-chromosome maintenance proteins
MCP-1	monocyte chemoatractant protein-1,chemokine
M-CSF	macrophage colony-stimulating factor
MDF	myogenic determination factor
MDH	malate dehydrogenase
MDM2	murine double minute-2, a p53-associated oncogene

MeCP2	methyl CpG binding protein 2
MEF	myogeneic enhancer factor
MEF-2	myocyte enhancer factor-2
MEK	MAPK/ERK kinase, MAPKK
MEKK	MEK kinase
Memapsin	β-secretase, membrane-associated aspartic protease involved in the production of β-amyloid peptide in Alzheimer's disease,
Mer5	see Aop1
MGC	Müller glial cell
MHC	major histokompatibility complex
MHC	myosin heavy chain
Mixer	a gene important for early endoderm formation in Xenopus
Miz-1	myc interacting zinc finger protein
MKP	MAP kinase phosphatase
MLC	myosin light chain
MLCK	myosin light chain kinase
MLH1	
MLK	mixed lineage kinase
MLP	myosin like protein,
MMAC	Mutated in multiple advanced cancers, syn PTEN
MMP(1-17)	matrix metalloproteinase, zinc-dependent endopeptidase, family of proteins a.o. collagenase-1 (MMP-1), gelatinase A (MMP-2), stromelysin-1 (MMP-3), matrilysin (MMP-7), enzymes are degrading proteins of the ECM and are involved in metastasis
MMP	mitochondrial membrane permeabilisation, observed in early apoptosis
MMR	mismatch repair
MMTV	mouse mammary tumour virus
MNK	MAP kinase-interacting kinase
MPF	M-Phase promoting factor
MPF	mitosis promoting factor
MPP	mitochondrial processing protease
MPR	mannose-6-phosphate receptor
Mot1	modifier of transcription 1 gene
Mox1	mitogenic oxidase 1
Mox2	TF
MRF-1,2	human modulator recognition factor,
MRP	multidrug resistance protein, belongs to the ABC superfamily of transport protein
MSH	melanocyte-stimulating hormone, see POMC
Msh	muscle segment homeobox
MSK-1	mitogen and stress activated kinase-1

MSP23	macrophage 23-kDa stress protein
Msx1	TF, homeobox-containing, has the ability to reverse both teminal differentiation and commitment to the muscle cell fate
MT1	membrane-type 1
MTF-1	metal-responsive TF, Zn-finger protein,
MTOCs	microtubule-organizing centers
mTOR	mammalian target of rapamycin
MuSK	muscle-specific kinase
Mxi1	belongs to the mad family of proteins, antagonists of myc oncoproteins
MyoD	myogenic determinaton factor, TF, essential for differentiation of muscle cells, binds to E-boxes CANNTG,
Myc	oncogene, TF, regulating proliferation,
Myt1	a dual specificity protein kinase
N-cadherin	neural cadherin
NAF	neu-activating factor,
NCAM	neural cell adhesion molecule
NCC	nonchordate classic cadherin domain
NCC27	nuclear chloride ion channel, localised in the cell nucleus
Nck	SH2/SH3-adaptor protein, s. Crk, Grb2, p85 subunit of PI3K,
NcoA	nuclear receptor co-activator
NcoR	nuclear receptor co-repressor
NEM	N-ethylmaleimide, modifies SH-groups,
Neprilysin	thermolysin-like zinc metalloendopeptidase,
NER	nucleotide excision repair
NES	nuclear export sequence
NeuroD	TF, homologue to Beta2
Neu	oncogene, transmembrane glycoprotein, receptor for growth factors, tyrosine kinase in the cytoplasmic domain which is point mutated and always active transforming the resp. cell
Neuregulin-1	ligand of ErbB2 and ErbB3 receptors playing multiple roles in glial development
Neurexin	brain-specific cell surface proteins, hundreds of isoforms,
NF-1	nuclear factor 1, family of TF, encoded by four genes and generated by differential splicing, bind as homodimer constitutively to DNA,
NF-AT	nuclear factor of activated T cells
NFkB	nuclear factor kappa B
NGF	nerve growth factor
Ngn1	neurogenin, bHLH TF promoting neurogenesis and inhibiting glial differentiation, necessary for β-cell differentiation
NHE1,2,3,4,	sodium-hydrogen exchanger, plasma membrane bond antiporter that mediates the movement of extracellular Na^+ ions and intracellular H^+ ions.
NICD	notch intra-cellular domain
NIDDM	Non-insulin dependent D.m.

NIK	NFkB induced kinase
NK	natural killer
NKEF-A	natural killer cell enhancing factor
NLK	NEMO-like kinase
NLS	nuclear localisation signal
NO	nitric oxide, signal and effector molecule released by endothelial cells, synthesised by NO-synthase (NOS), NO stimulates guanylate cyclase to produce cGMP, NO dilates blood vessels
Notch	2703-amino–acid long type I transmembrane protein synthesized into the ER. It is cleaved by a furin-like protease in the Golgi during trafficking to the cell surface. The two proteolytic fragments remain associated to form the functional receptor. Following ligand binding (DSL) notch undergoes further cleavage by γ–secretase under control of presenilin releasing NICD, NICD is translocated to the nucleus and modifies transcription of target genes through its association with CSL proteins
Nos	Nanos, trans-acting factor that binds to 3'UTR regulatory element NRE
NOSIP	eNOS interacting protein, binding to the C-terminal region modulating ist enzyme activity
Nox1-4	NADPH oxidase,
NPAS	neuronal PAS domain protein
NPC	nuclear pore complex
NRE	nanos response element
Nrf	TF
NRG	neuregulin
NRL	TF
NRSF	TF, neuron restrictive silencer factor, syn. REST, a negative regulator of neuronal genes
NSF	N-ethylmaleimide-sensitive factor, contains ATPase activity, interacts with SNAPs to regulate fusion of vesicles,
nSMase	neutral spingomyelinase
nt	nucleotide
NTF-1	nuclear transcription factor 1
NTF2	nuclear transport factor 2, ran-GDP binding protein p10,
NuA3	Nucleosomal acetyltransferase of histone H3
nucleolin	
NuMA	microtubule-associated protein
nup153	Nucleoporin, localized on the intranuclear side of the nuclear pore and contains separate binding sites for importin α/β, which mediates classical NLS import, and for transportin, which mediates import of different nuclear proteins.
NURF	nucleosome remodelling factor
Oct-2	TF,
OPG	osteoprotegerin, inhibitor of osteoclast differentiation,
OPGL	osteoprotegerin ligand, osteoclast differentiation factor,

ORC	origin recognition complex
ORF	open reading frame
OSBP	Oxysterol binding protein
OSF-3	osteoblast specific factor
Osk	oskar, TF
OT	oxytocin
OTC	ornithine transcarbamylase
p19Arf	p19 alternative reading frame protein, a tumor suppressor
P21	cyclin-dependent protein kinase inhibitor (CDI), transcriptionally regulated by p53, syn.: cip1, waf1, sdi
p26/27	common progenitor of muscles 26 and 27
P27	CDI
P38	stress-activated MAPK of 38 kDa,
P 53	TF, tumour suppressor protein that protects from DNA damage
p300	histone acetyltransferase, highly related to CBP, interacts with phosphorylated CREB, p53 and hormonal receptors like RXR, RAR and TR,
P70(s6k)	p70 ribosomal S6 kinase, protein kinase downstream of PDK-1
PAB P	Poly-A-tail-binding protein
PAC	P1 artificial chromosome A vector used to clone DNA fragments (100- to 300-kb insert size; average, 150 kb) in *Escherichia coli* cells. Based on bacteriophage (a virus) P1 genome.
PACAP	pituitary adenylate cyclase-activating peptide
PAIP	PABP-interacting protein
PAF	plantelet-activating factor
Pag	proliferation associated gene, thioredoxine-dependent peroxide reductase
PAI-1	plasminogen activator inhibitor-1
PAK	p21-activated protein kinase, involved in neurogenesis,
PAI-1	PA inhibitor
PAI	plasminogen activator
PAIP	PABP-interacting protein
PAK	p21-activated kinase
PAP	Poly-A-polymerase, is phosphorylated and inactivated by cdk`s (f.e. p34/cyclin B)
Pap1	TF
Papc	paraxial protocadherin
PARs	protease-activated receptors, G-protein coupled trans-membrane receptors, PARs-1, -3, -4 are activated by thrombin, PAR-2 by trypsin,
Par	partitioning defective, protein family involved in determining cellular asymmetry,
Par1	contains Ser/Thr kinase-like motifs, localises to the posterior pole of C.elegans zygote,
Par2	contains myosin-like ATP-binding site and a cys-rich domain,
Par3	contains three PDZ domains, interacts with Par6

Par6	co-localises with Par3 at the anterior pole of C.elegans zygote, associates with Par3 and small GTPases via its CRIB and PDZ domains, directly regulates member of the PKC family,
PARP	Poly(ADP)Ribose Polymerase, involved in DNA-repair,
PAT1	phytochrome A signal transduction1
Pax	Paxilin
Pax3	paired box containing protein, TF
Pax4	TF
Pax6	TF
PBP	PSE binding protein
PBS	phosphate-buffered saline
PC1,2	prohormone convertase, PC2 is a subtilisin like protease involved in intracellular processing of prohormones and proneuropeptides
P-cadherin	placental cadherin
p/CAF	p300/CBP-associated factor; histone acetyltransferasease acting as a nuclear receptor coactivator,
PcG	polycomb group; multimeric, chromatin-associated protein complex maintaining cell type specific gene expression
PCNA	proliferating cell nuclear antigene
PCD	Programmed cell death, apoptosis,
p/CIP	p300/CBP co-integrator associate protein, histone acetyltransferase
PCNA	proliferating cell nuclear antigen
PCR	polymerase chain reaction A method for amplifying a DNA base sequence using a heatstable polymerase and two ca. 20-base primers, one complementary to the (+) strand at one end of the sequence to be amplified and the other complementary to the (-) strand at the other end. Because the newly synthesized DNA strands can subsequently serve as additional templates for the same primer sequences, successive rounds of primer annealing, strand elongation, and dissociation produce rapid and highly specific amplification of the desired sequence. PCR also can be used to detect the existence of the defined sequence in a DNA sample.
Pcr1	TF,
PDF	pidment-dispersing factor, neuropeptide,
PDGF	plantelet derived growth factor
PDI	protein disulfide isomerase
PDK1	Phosphoinositide-dependent protein kinase
Pds1	
Pdx-1	Pancreatic duodenal homeobox, TF involved in pancreas development and regulation beta-cell-specific genes like insulin

PDZ	
PECAM	platelet–endothelial cell adhesion molecule
PEK	pancreatic eukaryotic initiation factor 2alpha-subunit kinase
Pem	posterior end mark
PERK	type 1 transmembrane ER-resident protein kinase
PERP	apoptosis-associated target of p53, member of the PMP-22/gas3 family,
Pex5p, 7p	cytosolic receptors for PTS-containing cargo, ferry them to the peroxisomal membrane,
PFGE	pulsed-field gel electrophresis
PGC-1	PPAR Gamma Coactivator-1
PGP9.5	protein gene product 9.5, a neuron-specific peptide that functions to remove ubiquitin from ubiquitinarted proteins and prevents them from targeted degradation by proteasomes. potential tumor marker for RCC and non-small-cell lung cancer
PH domain	pleckstrin homology domain
PH	pleckstrin homology
PHA	Phytohemagglutinin
Phas	phosphorylated heat- and acid-stable protein, binds eIF4E when unphosphorylated, is phosphorylated by mTOR
PIC	pre-initiation complex
PIC1	see SUMO-1
PI3K	phosphatidylinositide-3'-kinase
PI(3,4,5)P3	phosphatidylinositide 3,4,5-triphosphate
PIAS	protein inhibitors of activated STATs
PIP2	phosphatidylinositol 3,4-bisphosphate
PIP3	phosphatidylinositol 3,4,5-trisphosphate
Pitx2	TF
PKA	protein kinase A
PKB/Akt	protein kinase B/Akt
PKC	protein kinase C
PKR	dsRNA-dependent serine/threonine protein kinase
PH	Pleckstrin homology domain directing membrane targeting by binding to polyphosphoinositides
PhasI	phosphorylated heat- and acid-stable protein, protein kinase substrate, binding eIF-4E and thus inhibiting protein synthesis, eIF-4E is released after phosphorylation of PHAS-I via MAPK/PKC/p70(s6k) pathway and becomes part of the trimeric complex eIF-4F consisting of eIF-A/eIF-4G/eIF-4E initiating translation by binding of the mRNA cap-structure to eIF-4E. eIF-4A has helicase activity
PI3K	phosphatidyl-inositide 3'-kinase, heterodimer consisting of a p85 regulatory subunit with SH2 domains and a p110 catalytic subunit, activates PKB
Pif1p	yeast helicase, catalytic inhibitor of telomerase,
Pit-1	TF,
PKA	Proteinkinase A

PKB	Proteinkinase B, activated bei PtdIns(3,4)P_2 and PDKs, syn. Act and Rac, phosphorylates o.a. caspase 9 at Ser 196 inhibiting apoptosis
PKBR1	PKB related kinase but without PH domain
PKC	Proteinkinase C
PKI	protein kinase A inhibitor
PKR	ser/thr kinase, phosphorylates eIF2, IFN-induced antiviral response
PLC	Phospholipase C
PLD	Phospholipase D
Plectin	protein which links intermediate filaments with microtubels, actin filaments, and membrane components,
plexins	receptors for semaphorins, acting via Rho family GTPases on actin cytoskeleton
Plk1	polo-like kinase 1
PLP2A	Phospholipase 2A
PLZF	promyelocytic leukemia-associated zinc finger
PMA	phorbol myristate acetate
PMC	primary mesenchyme cell
PML	promyelocytic leukemia
PMN	polymorphonuclear leukocytes
PMSF	phenyl methyl sulfonyl fluoride, inhibitor of proteases,
PNPase	polynucleotide phosphorylase
PN-II	protease nexin-II, protease inhibitor, a secreted form of APP
PNC	peripheral nervous system
PNK	polynucleotide kinase
Pol II	RNA polymerase II
POD-1	coronin-like protein binding to F-actin, is involved in regulating anterior-posterior polarity in a one cell embryo
POMC	proopiomelanocortin, 31 kDA glycosylated protein precursor synthesized in the pituitary, posttranslational processing yields several peptides: ACTH, β-lipotropin α-, β–, γ-MSH, CLIP, -endorphin,
POU	pit-oct-unc, TF-family
POZ	poxvirus and zinc finger protein self-oligomerizing domain
PPAR	peroxisome proliferator-activated receptor
Pplase	peptdyl prolyl cis>/trans isomerase
PP1	protein phosphatase 1
PPAR	peroxisome proliferator-activated receptor, three isotypes α,β,γ, bind to DNA target site only as heterodimer f.e. PPAR/RXR, ligands are linoleic acid, leukotriene B4 or prostanglandins
PR	progesterone receptor
PRAK	p38 regulated activated kinase
PRE	PcG response element
PRE	Polycomb response element
Presenilin	protease generating an activated Notch fragment in signaling, mutated in familial Alzheimer's disease

Primase	enzyme that polymerizes ribonucleotide triphosphates in the 5'-3' direction to form short RNA oligomers that serve to prime lagging-strand synthesis
Primosome	multi-enzyme complex consisting of helicase and primase that drives dsDNA separation at the replication fork and synthesizes RNA primers for Okazaki fragment synthesis
PRL	Prolactin
PR	progesterone receptor
Proteasom	2500-kDa structure containing a 700-kDa protease core and two 900-kDa regulatory domains, place of intracellular proteolysis
Prox1	TF, required for the development of the lymphatic system
Prop-1	Prophet of Pit-1
PRP	protector protein
PS	phosphatidyl serin
PS1,2	Presenilin, eight-transmembrane domain protein, involved in Notch signalling by activating γ–secretase which releases the NICD
PSE	
PSM	presomitic mesoderm
PSR	phosphatidyl serin receptor
Ptc	patched, tumor suppressor gene, subunit of Shh receptor
pTEFb	positive transcription elongation factor, recruitet by Tat to TAR
PTEN	phosphatase and tensin homolog deleted on chromosome ten, dephosphorylates position D3 of phosphatidylinositol 3,4,5,-trisphosphate (PtdIns(3,4,5,)P_3) which is produced by PI3K and regulates PDK1; tumor suppressor on chromosome 10, syn.: MMAC, TEP1
PTGS	posttranscriptional gene silencing, which occurs when a transgene is introduced to a cell, proteins of the helicase family are involved
PTK	protein tyrosine kinase, Src-family: Src, Yes, Fyn, Lyn
PTP	Protein tyrosine phosphatase
PTP	permeability transition pore
PTS	Peroxisomal targeting signal
Pum	pumilio, trans-acting factor that target 3'UTR regulatory elements
PVDF-Membran	Polyvinylendifluorid-membrane
PYK2	proline-rich tyrosine kinase2
QTL	quantitative trait locus,
RA	rheumatoid arthritis
Rac	member of the ras superfamily of small GTPases, along with Rho, Rabs, Rans, Raps, Rals a.s.o., links RTK to WASP-related proteins
Rac	see PKB
RACE-PCR	rapid amplification of cDNA ends-polymerase chain reaction
Rack1	recepror for activated protein kinase C1
RAD1	Exonuclease, radiation sensitive

Raf	ser/thr-kinase, activated by ras and activating MAPKK (MEK),
RAG1,2	proteins involved in repair of DNA double strand breaks
RAIDD	RIP-associated ICH/CED-3-homologous protein with death domain
RalA u. B	GTPases, interacting with ras
RAR	retinoic acid receptor
Ras	
Ran	ras-related nuclear protein, A Ran-GTP gradient across the envelope is created by the asymmetric distribution of RanGAP, which is in the cytosol, and RanGEF in the nucleus, probably associated with chromatin. RanGTP triggers release of imported cargo from import carriers, but promotes loading of export cargo onto export carriers. Import carriers recycle back to cytoplasm bound to Ran-GTP. NTF2 (or p10) binds to RanGDP and carries Ran trough the nuclear pore into the nucleus, where it is released by RanGEF. Ran bound to GTP is also required for the induction of spindle formation by chromosomes in M phase, Ran action requires TPX2, a microtuble-associated protein
RanBP	ran binding protein
RanBP1	ranGTP binding protein
RanGAP	ran GTPase-activating protein
RanGEF	ran GTP exchange factor
Rap 1 p	repressor activator protein 1, binds to the terminal telomeric repeat
RAPD	random amplified polymorphic DNA
RAR	retinoic acid receptor
Rb	retinoblastoma; tumor suppressor; protein, involved in regulation of cell-cycle control, apoptosis and differentiation, is cell-cycle dependent phosphorylated, underphosphorylated in G0 and G1 it forms a heterotrimeric inactive complex with E2F/DP by binding to the E2F transactivation domain, after Rb phosphorylation transcriptionally active E2F/DP is released. Rb also interacts with HDACs and SWI/SNF, and interaction of Rb with E2F allows these chromatin remodeling enzymes to be targeted to promoters where they can promote nucleosome assembly
RB1	
RBP	TF, transcriptional repressor interacting with TAFII110 and TFIIA
RC-1	recombination complex-1
RCC-1	regulator of chromosome condensation, a ß propeller chromatin-bound protein, GEF for Ran
RE	response element
REE1	replication enhancing element 1,
REMI	restriction enzyme mediated integration
reln	TF, reelin, function during brain development,

replisome	multi-enzyme complex that includes the primosome and all other activities associated with replication
REST	repressor element 1 silencing transcription factor, syn. NRSF
RFBP	Ring Finger Binding Protein,
RFLP	restriction fragment length polymorphism Variation between individuals in DNA fragment sizes cut by specific restriction enzymes; polymorphic sequences that result in RFLPs are used as markers on both physical maps and genetic linkage maps. RFLPs are usually caused by mutation at a cutting site.
RGD	Arg–Gly–Asp
RGS	regulator of G-protein-signaling, protein family, function primarily as GTPase-activating proteins (GAPs) for heterotrimeric G-protein alpha subunits
RHA	RNA/DNA helicase, transcriptional coactivator,
RHAMM	receptor for hyaluronic acid mediated motility
Rho	family of small GTPases
RhoC	small GTPase, enhances metastasis when overexpressed
RING1	really interesting new gene 1, codes for a protein containing a ring finger domain, a small zinc-binding domain specifically interacting with the E2 ubiquitin conjugating enzyme and acts itself as E3 ubiquitin protein ligase, ring proteins are APC, SCF, MDM2 a.o.
RIP	receptor interacting protein, ser/thr kinase, mediates TNF-induced NF-kappaB activation, recruits caspases-2 to TNFR signalling
RIP	regulated intramembrane proteolysis, proteins like notch, APP, which are sequentially cleaved at opposite sides of the plasma membrane
RLF-B	replication licensing factor B
RNA	A chemical found in the nucleus and cytoplasm of cells; it plays an important role in protein synthesis and other chemical activities of the cell. The structure of RNA is similar to that of DNA. There are several classes of RNA molecules, including messenger RNA, transfer RNA, ribosomal RNA, and other small RNAs, each serving a different purpose.
RNP	ribonucleoprotein
ROCK	Rho-associated protein kinase, as PAK1 involved in cofilin phosphorylation and thereby actin polymerisation via LIM kinase
RORα	nuclear orphan receptor, TF,
ROS	reactive oxygen species,
RPC	retinal progenitor cell
RPD3	HADC
RPE	retinal pigment epithelium
RPTR	receptor-like protein tyrosine phosphatases
RRE	Rev responsive element
RRM	RNA recognition motif

RSK	ribosomal S6 kinase
RSS	recombination signal sequence
RT	reverse transcriptase
RTK	receptor tyrosine kinase
RTP	receptor tyrosine phosphatase
RT-PCR	reverse transcriptase-polymerase chain reaction
RXR	Retinoid X receptor
PYK	receptor related to tyrosine kinases
S1P	Seite-1 protease, cleaves from the membrane bond SREBPs a N-terminal localised fragment which act as a bHLH-leucin zipper transcription factor
S6	small subunit ribosomal protein S6
S6K	S6 kinase
SAGA	histone acetylase
SAK	polo-like kinase like Plk, Snk, PRK/Fnk, have polo box domains pb1 and pb2 near the C terminus.
Sam68	Src-associated in mitosis, 68 kD protein, has an RNA-binding domain, SH2 and SH3 domains. Interacts with RNA, src-family kinases, grb2 and PLC γ. Important for mitosis, and inhibition of phosphorylation of Sam68 by radicicol will block exit from mitosis.
SAP	serum amyloid protein
SAPK	stress activated protein kinase, JNK
SARA	Smad anchor for receptor activation, cytoplasmic protein that tehters Smads in the cytoplasm, occludes a NLS on the MH2 domain and fascilitates Smad presentation to the activated receptors, it contains a FYVE domain, a structure that in other proteins mediates binding to PI3P on endosome membranes
SASE	sample sequencing
Sas3	something about silencing, catalytic subunit of NuA3
SCAP	SREBP cleavage activating protein
Scar1	WASP related adaptor protein which connects G-protein-coupled receptors to the actin cytoskeleton
Scc1	
SCF	stem cell factor
SCF complex	Skp1/Cdc53/F-box ubiquitin ligase protein complex,
ScFv	single-chain antibody variable region fragment
SCID	severe combined immune deficiency
SCN	suprachiasmatic nuclei, defined cell cluster in the anteroventral hypothalamus, circardian pacemaker
Scr	Sex combs reduced
SD	Shine-Dalgarno
sdi	syn. p21
SEMA	semaphorins, syn. collapsins; family of secreted and membrane-associated proteins
Semaphorins	ligands of plexins
Septins	members of a conserved family of GTPases, septin H5 is associated with the plasma membrane and specifically

	binds phosphatidylinositol4,5-bisphosphate and PtdIns(4,5)P_2
Sev	sevenless
SF1	steroidogenic factor 1, TF, zinc finger, activates transcription through TFIIB recruitment,
SFV	Simian Foamy virus
SGK	Serum- and glucocorticoid-inducible recepter
SH2	Src-homology-2 domain
SH3	Src-homology-3 domain
Shc	SH2-containing collagen-related proteins
Shg	shotgun.
Shh	sonic hedgehog, secreted protein identified in *Drosophila* playing a role in segment polarity, its receptor is composed of two proteins: the tumor suppressor protein patched (Ptc) and the seven-transmembrane protein smoothened (Smo).
SHIP	SH2-containing Inositol 5'-Phosphatase, interacts with proteins like Shc, Grb2, Gab family proteins, PI3'K, PTEN
SHOM	sequencing by hybridization on matrices
SHP1	SH2-containing phosphatase1
SHP2	SH2-containing phosphatase2
Sin3	transcriptional corepressor
SIR	silent information regulator, protein family of NAD-dependent protein deacetylases,
Six1,2	TF
Skap55	Src-kinase-associated protein
SKO1	TF
SKP2	S-phase kinase associated protein2
SL-1	RNA polymerase I-specific complex
Slap	Slp-76-associated protein
SLBP	stem-loop binding protein
Slp	sloppy paired
Slp-76	SH-2-domain-containing leucocyte protein of 76 kDa
SLPI	secretory leucocyte protease inhibitor
SM	sex myoblast
Smad	contraction of Sma and Mad(mothers against decapentaplegic)
Smases	sphingomyelinaes
SMC	smooth muscle cell
SMC	structural maintenance of chromosome family, four types (SMC1-4), chromosomal ATPases and proteins acting as condensins and cohesins,
SMCC	SRB/mediator coactivator complex
Smo	smoothened, subunit of the Shh receptor,
SMRT	silencing mediator for RXR and TR
SMT3C	s. SUMO-1
Snf	TF, sucrose non-fermenting,
SNAP	S-nitroso-N-acetylpenicillamine
SNAP25	synaptosomal associated protein of 25 kDa
SNAPc	snRNA-activating protein complex

SNAPs	soluble NSF attachment proteins
SNAREs	SNAP receptors, v(vesicle)-SNARE and t(target)-SNARE
SNF	sucrose non-fermenting, yeast protein which acts in complex with SWI as ATPase remodelling chromatin after binding to nuclear receptors
SnoRNAs	small nucleolar RNAs,
SNP	single nucleotide polymorphism
SnRNP	small nuclear ribonucleoprotein
SOCS	suppressor of cytokine signalling, binds directly to JAK's
SOD	superoxide dismutase
SON	supraoptic nucleus
Sos	son of sevenless guanine nucleotide exchange factor
SOX	SRY-related HMG box protein family, TFs, bind at AACAAT,
SP-A	surfactant protein A
SP1	TF, binds to GC-boxes,
SPC	signal peptidase complex
SRB	suppressor of RNA-polymerase B, mediators of transcriptional regulation,
SRC-1	steroid receptor coactivator-1, histon acetyltransferase
SRE	Serum Response Element
SRE	sterol response element,
SREBP	Sterol regulatory element-binding proteins, membrane–bound transcription factors of the basic-helix-loop-helix leucine zipper family which activate transcription of genes involved in sterol and fatty acid synthesis, SREBPs are attached to the ER membrane by two transmembrane spans and are released by cleavage by the proteasome, SREBPs form a complex with SCAP
SREC	Scavenger receptor from endothelial cells
SRF	serum response factor
SRP	signal recognition particle
SRS	Sos recruitment system
SRY	nuclear protein
SS	somatostatin
Ss	Spineless
SSB	single strand breaks
SSBR	single strand break repair
SSLP	single-sequence length polymorphism
SSR	simple sequence repeat
SSTR	somatostatin receptor
STAT	signal transducer and activator of transcription; binds to phosphorylated Tyr-residue of membranbound cytokine-receptors and is there phosphorylated by JAK, which leads to the release and dimerisation of STAT. The dimer is acting as TF.STAT1-5,
STM	scanning tunneling microscope
Stromelysin-1	member of MMP,
STRP	short tandem repeat polymorphism
STS	sequence-tagged site

	Short (200 to 500 base pairs) DNA sequence that has a single occurrence in the human genome and whose location and base sequence are known. Detectable by polymerase chain reaction, STSs are useful for localizing and orienting the mapping and sequence data reported from many different laboratories and serve as landmarks on the developing physical map of the human genome. Expressed sequence tags (ESTs) are STSs derived from cDNAs.
Su(H)	Suppressor of hairless, DNA-binding component of the Notch signalling pathway, homologue to CBF-1,
SUMO-1	small ubiquitin-like modifier, syn.: PIC1, UBL1, GMP1, SMT3C, Sentrin, is ATP-dependent bond to target proteins like RanGAP1, PML, Sp100 and IκBα,
SUR1	sulfonylurea receptor, subunit of the ATP-sensitive K-channel present in the plasma membrane of pancreatic ß-cells involved in insulin secretion
Survivin	see IAP, required for mitosis, involved in microtubule organization and cytokinesis
SWI	switch, yeast protein switching mating type by acting in complex with SNF as DNA-dependent ATPase binding to nuclear receptors, human SWI/SNF ATPases are BRG1 and hBRM
Syk	non-receptor tyrosine kinase involved in integrin signaling
Synaphin	cytosolic protein binding to syntaxin, essential for synaptic vesicle exocytosis, syn. complexin,
Synaptobrevin	s. VAMP
Synaptojanin	Rac1 effector,
Synaptophysin	protein involved in neurotransmitter exocytosis
Syntaxin	homology to t-SNARE, syn. HPC-1
TACE	TNFα converting enzyme
TAF	TBP associated factors
TAK	Tat associated kinase phosphorylating CTD
TAK	TGFß-activated kinase
Tal	Talin

T-ALL	T-cell acute cell lymphoblastic leukemia
TAMERE	transallelic targeted meiotic recombination
Tankyrase	PARP, promotes telomere elongation by preventing binding of TRF1 by ADP-ribosylation,
TAP1,2	transporters associated with antigen presentation, essential for the transport of peptides in association with major histocompatibility class I molecules, member of the ABC transporter,
TAR	Transactivation response element on the 5'-end of viral transcripts
Tat	Transcriptional activator, binding specific to TAR recruiting pTEFb and p300/CBP
tBid	truncated Bid
TBL1 protein	transducin ß-like protein,
TBP	TATA-Box binding protein
Tbx1	TF
TCF	T cell factor, a Wnt signaling transcription factor
TCF	ternary complex factor
TCR	T-cell receptor
Telomerase	DNA-polymerase that uses an integral RNA component to synthesize telemere repeats onto chromosome ends
Tensin	cytoskeletal protein, binds to actin and participates in the assembley of the signaling complex at focal adhesion
TEP	thioester-containing protein, acute phase glycoprotein
TetR	tet-repressor
TF	trigger factor
TF	Tissue factor
TF	transciption factor
TGF	transforming growth factor
TGN	trans-Golgi network
Th	T helper
TH	tyrosine hydroxylase
Tiam1	T-lymphoma invasion and metastasis gene 1
TIF	translation initiation factor
TIM	translocase of inner membrane, protein complex (TIM 17, 23,44) essential for proteintransport through the inner mitochondrial membrane
TIMP	tissue inhibitor of MMPs
Tip60	HIV1-Tat interactive protein, histone acetyltransferase
TLR	Toll-like receptors
TNF	tumor necrosis factor
TNFR	TNF receptor
TOM	translocase of outer membrane, protein complex (Tom 5,20,22,40,70) essetial for protein transport through the outer mitochondrial membrane
TOP	5' terminal oligopyrimidine, familie of mRNA's
TPA	tissue type plasminogen activator
TR	thyroid hormone receptor
TRADD	TNF receptor-1-associated death domain protein
TRAF2	TNF receptor-associated factor 2

TRANCE	TNF-related activation induced cytokine
TRAPP	transport protein particle, a compley of ten subunits essential for tethering of ER-derived transport vesicles to Golgi membranes
TRBP	PKR inhibitor
TRCP	component of the E3 ubiquitin ligase
TRF1	telomerase regulating factor 1
TRH	thyrotropin-releasing hormone
TRNA	transfer RNA, a class of RNA having structures with nucleotide sequences that are complementary to the triplet, transfering amino acids coupled to the CAA-end to ribosomes nucleotide coding sequences of mRNA. The role of tRNAs in protein synthesis is to bond with amino acids and transfer them to the ribosomes, where proteins are assembled according to the genetic code carried by mRNA.
Trl	Trithorax-like
TCR	T-cell receptor
TCV	turnip crinkle virus
TCPTP	T-cell protein tyrosin phosphatase
TEF-1	Transcriptional enhancer factor-1
TEP1	TGFß regulated and epithelial cell enriched phosphatase, syn. PTEN,
TERT	telomerase reverse transcriptase, catalytic subunit forming together with an template-containing RNA subunit the telomerase holoenzyme
TF	Transcriptional factor
TFI	
TFII	
TFIII	
TGF-β	transforming growth factor β,
TGGE	temperatur gradient gel electrophoresis
TIM	Triosephosphate isomerase, Enzym of the glycolyse
TIM	translocase of the inner membrane, s. also TOM
TIF-1	
TIGR	The Inst. for Genomic Research
TLP	TBP-like protein
TLR-2	Toll-like receptor-2
mBr1,2,3	tropomyosin isoforms
Tm5a,b	tropomyosin isoforms
Tm5NM1,2,3,4	tropomyosin isoforms
TNF	Tumor necrosis factor, after binding to its receptor (TNF-R1, receptor family) TNF induces apoptosis or NF- activation
TNFR	Tumor necrosis factor receptor, family
TOM	translocase of the outer membrane, protein complex within the mitochondria membrane importing cytoplasmatically synthesized proteins, TOM complex consists of the receptors Tom20p,-22p,-37p,-70p (which

	have overlapping roles in recognizing mitochondrial precursors), the pore forming component Tom40p and the three small Tom proteins, Tom5p,-6p and -7p. After passing through the TOM complex, the precursor engages the translocase of the inner membrane,
TOR	target of rapamycin,
TPA	phorbol ester, 12-O-tetradecanoyl-phorbol-13-acetate, activates transcription on TRE's via PKC
TP53	
TRADD	TNF-receptor-associated death domain protein, signal-transduction adapter
TRANK	thioredoxin peroxidase-related activator of NF kappa B and c-Jun N-terminale kinase,
TRAP	thyroid hormone receptor-associated protein
TR-AP	transformation-associated protein
TRAF	TNFR-associated factors
TR	thyroid hormone receptor
TRE	Thyreoid response element, binding site of the T3/T4-receptor-complex
TRE	TPA response element, TGACTCA, AP-1 binding site,
TREB	tax-responsive element binding protein
TRF1,2	TTAGGG repeat factors 1 and 2, binds to telomeric ends preventing recombination between two telomers, homologuos to the yeast TTAGGG-binding protein Tbf1
TRH	Thyreoid releasing hormon from the hypothalamus acting on the hypophyse, stimulates TSH-release
TRIM	T-cell receptor interacting molecule
Tropomyosin	microfilament components, several cell specific isoforms known
Tsa	thiol specific antioxidant, thioredoxine-dependent peroxide reductase
TSP	thrombospondin
TSH	Thyreoidea Stimulating hormon from the hypophyse, acting at the thyroidea
ttv	tout-velu,integrated membrane protein,homolog to hEXT-1
T2Rs	family of taste recepters,
UAS	upstream activater sequence
UBC9	ubiquitin-conjugating enzyme 9
UBF	upstream binding factor, binds to UCE
ubiquitin	76 amino acid protein, polyubiquitin chain on proteins act as signal for targeting substrates to the 26S proteasomes for degradation
UBL1	see SUMO-1
UBP	ubiquitin-specific protease
Ubx	Ultrabithorax
UCP	uncoupling protein-1
UCE	upstream control element, GC-rich region in the promoter of genes transcribed by RNAP1. Binding site of UBF,
UE	
UPA	urokinase-type plasminogen activator

UPAR	uPA receptor
Upd	unpaired, extracellular ligand,
USPS	ubiquitin-based split-protein sensor
UTR	untranslated region
Utrophin	dystrophin-related cytoskeletal protein
VAMP	vesicle associated membrane proteine, syn. synaptobrevin, homology to v-SNARE,
VASP	vasodilator-stimulated phosphoprotein
Vav1	guanine nucleotoide exchange factor that selectively activates the Rac1 GTPase
Vax1	TF, homeodomain protein, directs development of the basal forebrain and visual system,
VDAC	voltage dependent anion channel, forms with ANT a PTP within the mitochondria which releases cytochrome during apoptosis
VDR	Vitamin D receptor
VE-cadherin	vascular-endothelial cadherin
VEGF	vascular-endothelial growth factor
VLDL	very low density lipoprotein
VP	vasopressin
VP16	viral
VSMC	vascular smooth muscle cells
WAF1	cyclin-dependent kinase inhibitor, activated by p53, see also p21.
WASP	Wiskott-Aldrich syndrome protein, adaptor protein implicated in the transmission of signals from tyrosine kinase receptors and small GTPases to the actin cytoskeleton via the Arp2/3 complex,
Wee1	protein kinase, universal mitotic inhibitor kinase, inhibits entry into mitosis by phosphorylation of cdc2-kinase
Wg	Wingless, TF
Wnt	superfamily of secreted glycoproteins involved in cell-cell-signaling, binds to the Frizzled receptor, activating the Dishevelled (Dsh) protein which inhibits GSK-3ß and leads to accumulation of ß-catenin in the nucleus where it interacts with TCF on target genes like ubithorax and engrailed. contraction of "Wingless" and "Int"
WT1	Wilms tumor-suppressor gene, TF, zinc finger protein, involved in kidney differentiation, binds to the EGR1 consensus activating transcription of amphiregulin, expression is regulated by SP1, Pax2 and Pax8,
Xld	Xolloid, metalloprotease which cleaves chordin and releases BMP4
XRCC1	TF, involved in DNA repair of single strand breakes, it interacts with PNK
XRN1	
YAC	yeast artificial chromosome. A vector used to clone DNA fragments (up to 400 kb); it is constructed from the telomeric, centromeric, and

	replication origin sequences needed for replication in yeast cells.
ZAK1	Zaphod kinase, contains two functional kinase domains,
Zta	TF