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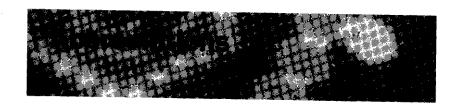
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ACE angiotensin-converting enzyme
ACK activin-receptor-like kinase

ADAM A disintegrin and metalloproteinase (family)
ADP-PNP adenosine 5'-[β, γ-imido]triphosphate
ADP-PCP adenosine 5'-[β, γ-methylene]triphosphate

AFAP actin-fibre-associated protein
AGE advanced-glycation end-product
AKAP A-kinase-associated protein
ALL acute lymphoblastic leukaemia
AMH anti-Müllerian hormone

AP activating protein

APAF apoptosis-activating factor

APC antigen-presenting cell OR anaphase-promoting

complex OR adenomatous polyposis coli

β-APP
 β-amyloid precursor protein
 β<sub>2</sub>-adrenergic receptor

ARAM motif antigen recognition and activation motif

ARE activin-reponse element OR antioxidant response

element

ARF activin response factor complex
β-ARK β-adrenergic receptor kinase
ARRE antigen-receptor response element

ASV avian sarcoma virus
ATP adenosine triphosphate
bcr breakpoint cluster region

BCR B-cell receptor

BDNF brain-derived neurotrophic factor

BH Bcl-2 homology domain bHLH basic helix-loop-helix

BMP bone morphogenetic protein

BUB genes making budding in yeast unresponsive to

benomyl

bp base pair

BP binding protein

**bZIP** 

BTK Bruton's agammaglobulinaemia tyrosine kinase

basic leucine zipper

Btk gene for Bruton's tyrosine kinase

CAH carbonic anhydrase CAK cyclin-activated kinase CAM cell-adhesion molecule

cAMP cyclic adenosine monophosphate

CAP CBL-associated protein CARD caspase-recruiting domain

CARM co-activator-associated arginine methyltransferase

Caspr contactin-associated protein

CBL product of the cbl proto-oncogene

CBP CREB-binding protein OR cAMP-binding protein

CD cell death

cdc cell division control gene

CDE cell-cycle-regulated DNA element

CDEF CDE-binding factor CDK cyclin-dependent kinase

CDKI cyclin-dependent kinase inhibitor

CDMP cartilage-derived morphogenic protein

cDNA complementary DNA cFC colony-forming cell

cGMP cyclic guanosine monophosphate

chk checkpoint kinase
Ci contactinhibin

CINs chromosomal instabilities

CIS cytokine-inducible SH<sub>2</sub>-(containing protein)
CLIP MHC-class II-associated invariant chain peptide

CNG cyclic nucleotide-gated

CNGC cyclic nucleotide-gated channel CNTF ciliary neurotrophic factor

Co-SMAD common SMAD

COUP-TF chicken ovalbumin upstream promoter transcription

factor

CPS carbamoyl phosphate synthase

9cRA 9-cis retinoic acid

CRE cAMP response element

CREB cAMP response-element-binding protein
CRIB cAMP response-element-binding protein
Cdc42/Rac interactive binding domain

Crk CT10 virus regulator of kinase colony-stimulating factor

Csk carboxy terminal src-related kinase cytotoxic lymphocyte-associated protein

DAG diacylglycerol

DNA-binding domain

robb death domain

DED death effector domain

DIF differentiation-inducing factor
DISC death-inducing signalling complex
DPC deleted in pancreatic carcinoma
dRNTPs deoxyribonucleotide triphosphates

double-stranded RNA

EBP erythropoietin binding protein

ECD extracellular hormone or ligand-binding domain

ECR extracellular matrix ecdysone receptor

ecdysone-responsive DNA element

EGF epidermal growth factor

EGFR EGF receptor

eIF-4E eukaryotic translation initiation factor-4E

EMP1 EPO-mimetic peptide 1

EPAC exchange protein directly activated by cAMP

EPO erythropoietin

ER endoplasmic reticulum OR oestrogen receptor

ERK extracellular signal-responsive kinase

FADD Fas 'death' domain FAK focal adhesion kinase

FAT focal adhesion targeting (domain)

FGF fibroblast growth factor

FGFR FGF receptor

FKBP FK-binding protein, immunophilin

fMLP N-formyl-Met-Leu-Phe

FOG friend of GATA-1 FPP farnesyl diphosphate

FSH follicle-stimulating hormone

FTase farnesyl transferase

Gab-1 Grb2-associated binder-1 GABA γ-aminobutyric acid

GAD glutamic acid decarboxylase
GADD growth arrest and DNA damage
GAP GTPase-activating protein
GARP glutamic-acid-rich protein

GBD GTPase-binding domain

GAS sequence

GCRK G-protein-coupled receptor kinase G-CSF granulocyte-colony-stimulating factor

interferon-y-activated sequence

GDI GDP-dissociation inhibitor

GDF growth and differentiation factors

GDNF glial-cell-line-derived neurotrophic factor GDNFR glial-derived neurotrophic factor receptor

GDP guanosine diphosphate
GEF GDP-exchange factor
GFAP glial fibrillary acidic protein
GGPP geranylgeranyl diphosphate

GH growth hormone

GM-CSF granulocyte-macrophage colony-stimulating factor

GMP guanosine monophosphate

GNRP guanine nucleotide release protein

GPCR G-protein-coupled receptor
GPI glycosylphosphatidylinositol

GPRP G-protein-regulated receptor serine/threonine phos-

phatase

GR glucocorticoid receptor

Grb growth-factor-receptor-binding protein
GRK G-protein-coupled receptor kinase (GRTH general refractoriness to thyroid hormone

Gs stimulatory G protein
GSK glycogen synthase kinase
GST glutathione S-transferase
GTF general transcription factor
GTP guanosine triphosphate
GTPase guanosine triphosphatase

HAC histone acetylase

HB-EGF heparin-binding EGF-like growth factor

HC heretidary chondrodysplasia
hCG human chorionic gonadotrophin
Hck haematopoietic cell kinase
HGF hepatocyte growth factor
hGH human growth hormone

hGHbp human growth hormone binding protein HHT hereditary haemorrhagic telangiectasia

HLF hepatocyte leukaemia factor

HLH helix-loop-helix

HMG high-mobility group (proteins)

HNF hepatic nuclear factor
hPRL human prolactin
hPPV human papilloma virus
hRE hormone-responsive element

Hsp heat-shock protein

heparan sulphate proteoglycans

5-HT

5-hydroxytryptamine (serotonin)
hTERT
human telomerase holoenzyme

IAP inhibitor of activated protease (caspase)
ICAD caspase-activated deoxyribonuclease inhibitor

ICE interleukin-1 $\beta$ -converting enzyme IDDM insulin-dependent diabetes mellitus

IFN interferon

IFNAR1 interferon-α receptor1
Ig immunoglobulin

IGF insulin-like growth factor

IL interleukin

IP<sub>3</sub> inositol trisphosphate
IR insulin receptor

IRE insulin response element
IRF interferon-response factor
IRS insulin receptor substrate

ISGF interferon-stimulated gene factor
ISRE interferon-stimulated response element

ITAM immunoreceptor tyrosine activation motif

JAB JAK-binding protein

JAK Janus kinase

JH juvenile hormone

JNK Jun N-terminal kinase

KGF keratinocyte growth factor

LAP latency-associated peptide

LBD ligand-binding domain

Lck lymphocyte kinase

LDL low-density lipoprotein

LFA lymphocyte-function-associated protein

LIF leukaemia inhibitory factor

LIFR LIF receptor

LIP lymphocyte inhibitory protein

LMW low molecular weight
LOH loss of heterozygosity
LPA lysophosphatidic acid

LTBP latent TGF-β binding protein
MAD mitotic arrest-deficient gene
MAP mitogen-activated protein

MAP kinase

MAPKK MAP kinase kinase

MAPKKK MAP kinase kinase kinase
MAT mating-type protein
Max Myc-associated factor X

MCSF-1 macrophage colony-stimulating factor-1
MEK mitogen-extracellular signal-responsive kinase

MEN multiple endocrine neoplasias

MHC major histocompatibility complex MIS Müllerian inhibiting substance

**MMPs** matrix metalloproteinases. **MMR** DNA mismatch repair system

MODY matury-onset diabetes of the young MvoD Myoblast determining gene or protein

NCC neural crest cell N-CoR nuclear co-repressor **NES** nuclear export signal

NF nuclear factor ...

NF1 neurofibromatosis type 1 or the neurofibromin GAP

NF-AT nuclear factor of activated T cells NF-ATc nuclear factor for activation of T cells

**NGF** nerve growth factor

NGFI-B nerve growth factor-induced receptor NIDDM non-insulin-dependent diabetes mellitus

NLS nuclear localization site **NMDA** N-methyl D-alanine NOD non-obese diabetic NPY neuropeptide Y

N-ethylmaleimide-sensitive fusion protein NSF

NT neurotrophin

OBP odourant-binding protein OMP 2 \* olfactory marker protein OP-1 osteogenic protein-1 ORC

origin recognition complex

ORF open reading frame

PA / phosphatidic acid or plasminogen activator

PAH phosphatidic acid hydrolase PAK p21 src-activated kinase p53BP2 p53-binding protein 2 **PCD** programmed cell death PDB protein database

PDE phosphodiesterase

**PDGF** platelet-derived growth factor

**PDGFR** platelet-derived growth factor receptor

**PDK** 3-phosphoinositide-dependent protein kinase

PH pleckstrin-homology (domain)

PhIP phosducin-like protein Pi inorganic phosphate • PIC pre-initiation complex

**PICK** perinuclear inhibitor of C kinase

PIP<sub>2</sub> PtdInsP<sub>2</sub>

PIP<sub>3</sub> phosphatidylinositol-3,4,5-phosphate PIP 5-kinase phosphatidylinositol phosphate 5-kinase

PKB protein kinase B
PKC protein kinase C
PLC phospholipase C
PLD phospholipase D

PMDS persistent Müllerian duct syndrome

Pol II RNA polymerase II PP protein phosphatase

PPAR peroxysome proliferator-activated receptor

PRL prolactin

PRPP phosphoribosyl pyrophosphate PTB phosphotyrosine-binding (domain)

PtdIns phosphatidylinositol

PtdIns-3-Pphosphatidylinositol-3-phosphatePtdInsP2phosphatidylinositol bisphosphatePtdIns-3,4-P2phosphatidylinositol-3,4-bisphosphatePtdIns-3,4,5-P3phosphatidylinositol-3,4,5-trisphosphate

PTP protein tyrosine phosphate or protein tyrosine

phosphatase

pTyr phosphotyrosine RA retinoic acid

RACK receptor-associated C-kinase

RAR retinoic acid receptor

Rb retinoblastoma
RC replication complex
RE response element

REL oncogene of avian reticuloendothelial virus

RET human transforming oncogene, in T-cell lymphoma

RGS regulator of G-protein signalling

RHR Rel homology region
RLF replication licensing factor
RNR ribonucleotide reductase

RPTP receptor protein tyrosine phosphatase

R-SMAD receptor-regulated SMAD
RTKs receptor tyrosine kinases
RXR 9-cis-retinoic acid receptor
S1P sphingosine-1-phosphate
SIRP signal regulatory protein

SAgs superantigens

SAM sterile a-motif OR S-adenosyl methionine

SAPKs stress-activated protein kinases
SCAP SREBP-cleavage-activating protein
SCID severe combined immunodeficiency

SF scatter factor

SHC SH<sub>2</sub>-containing (proteins) SH<sub>2</sub> Src-homology 2 (domain) SH<sub>3</sub> Src-homology 3 (domain). SHP small heterodimerization partners SHIP SH<sub>2</sub> domain-containing inositol 5-phosphatase SHR steroid hormone receptor SIRP signal-regulatory protein SMAD SMA-MAD-related SMRT silencing mediator for RAR and TR Smurf 1 SMAD ubiquitination regulatory factor 1 SNAP soluble NSF attachment protein SNARE SNAP receptor. SOCS SH<sub>2</sub> domain-containing suppressors of cytokine signalling SRB Suppressor of RNA polymerase B SRC SHR-co-activator or Src, a Rous sarcoma virus oncogene SRE serum response element **SREBP** sterol regulatory-element-binding protein SRF serum response factor SS-1 STAT-induced STAT inhibitor 1 STAT signal-transducing transcriptional activator (signal transducer and activator of transcription)  $T_3$ tri-iodothyronine  $T_{A}$ tetra-iodothyronine (thyroxine) TACE TNF-α converting enzyme TAD trans-activating domain TAF TATA-box-activating factor TAg large T-antigen TAK TGF-activated kinase T-ALL T-cell acute lymphoblastic leukaemia TAR aspartate receptor **TBP** TATA-box-binding protein Tcf T-cell factor TCF ternary complex factor **TCR** T-cell antigen receptor **TGF** transforming growth factor THR thyroid hormone receptor

TIMPs tissue inhibitors of metalloproteinases tyrosine-kinase-binding domain tumour necrosis factor  $\alpha$  tumour necrosis factor receptor tRA all-trans retinoic acid

TRADD tumour necrosis factor receptor-associated death

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TRAF

TRK

TNF-receptor-associated factors

TRAIL

TNF-related apoptosis-inducing ligand

TRAMP

· TNF-related apoptosis-mediating protein (receptor)

TSF UAS growth-factor tyrosine-kinase serine chemotaxis receptor upstream activating sequence

USP UTP

ultraspinacle protein uridine triphosphate

UV

ultraviolet

VDR.

vitamin D receptor

**VEGFs** 

vascular endothelial growth factors

VGF WASP vaccinia virus growth factor

ZAP-70 kinase

Wiskott-Aldrich syndrome protein ζ-associated protein 70 kinase

ZNF

zinc finger

ZIP

zinc finger protein