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## Abbreviations

$\lambda$	wavelength
AAA ATPase	adenosine triphosphatase associated with various cellular activities
AC	adenylyl cyclase
APS	ammonium persulfate
AQP2	aquaporin-2
ARF6	ADP-ribosylation factor 6
ATP	adenosine triphosphate
ATPase	adenosine triphosphatase
AVP	8-arginine vasopressin
$\beta_2$ AR	$\beta_2$ -adrenoceptor
BiP	immunoglobulin heavy chain binding protein
$B_{\max}$	maximal amount of specific binding sites
BSA	bovine serum albumin
cAMP	cyclic adenosine 3',5'-monophosphate
CBB	Coomassie Brilliant blue G250
cDNA	complementary deoxyribonucleic acid
CF	cystic fibrosis
CFTR	cystic fibrosis transmembrane conductance regulator
CHIP	C terminus of the heat-shock protein 70-interacting protein
CLSM	confocal laser scanning microscope
COP	coat protein complex
CP	core particle of the 26S proteasome
cpm	counts per minute
CPY*	carboxypeptidase Y mutant
Der1	Derlin-1
dH <sub>2</sub> O	deionized water

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DMEM	Dulbecco's Modified Eagle's Medium
DNA	deoxyribonucleic acid
dNTP	deoxynucleoside triphosphate
Doa10	ubiquitin ligase required for degradation of Alpha2p
DPBS	Dulbecco's phosphate buffer
DUB	deubiquitinating enzyme
E1	ubiquitin-activating enzyme
E2	ubiquitin-conjugating enzyme
E3	ubiquitin ligase
EC50	half maximal effective concentration
EDEM	ER degradation enhancer, mannosidase $\alpha$ -like
EDTA	ethylenediaminetetraacetic acid
eEF1A	translation elongation factor 1A
Endo H	endoglycosidase H
ER	endoplasmic reticulum
ERAD	ER-associated degradation
ERGIC	ER-Golgi intermediate compartment
ERK	extracellular signal-regulated kinase
FCS	fetal calf serum
GAPDH	glyceraldehyde 3-phosphate dehydrogenase
GDP	guanosine diphosphate
GFP	green fluorescent protein of <i>Aequorea victoria</i>
GPCR	G protein-coupled receptor
G protein	guanine nucleotide binding protein
gp78	RING finger-dependent ubiquitin ligase (E3)
GRK	G protein-coupled receptor kinase
GRP	glucose-regulated protein
GT	reglycosylating enzyme
GTP	guanosine triphosphate
HA	haemagglutamin

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HEK293	human embryonic kidney (clone 293)
Hrd1	3-hydroxy-3-methylglutaryl-coenzymA reductase degradation (E3)
Hsc	heat-shock cognate protein
Hsp	heat-shock protein
IB	immunoblot
IgG	immunoglobulin class G
Ire1	inositol-requiring enzyme 1
K <sub>D</sub>	dissociation constant
LB-Medium	Luria-Bertani medium
mAb	monoclonal antibody
MAPK	mitogen-activated protein kinase pathway
mRNA	messenger ribonucleic acid
MEK	mitogen-activated protein kinase
MG132	carbobenzoxy-L-leucyl-L-leucyl-L-leucinal
MHC	major histocompatibility complex
MS	mass spectrometry
MS/MS	tandem mass spectrometry
nano-ESI	nanoelectrospray ionization
NDI	nephrogenic diabetes insipidus
NEB	New England Biolabs
NF- $\kappa$ B	nuclear factor-kappa B
OD	optical density
pAb	polyclonal antibody
PAGE	polyacrylamide gel electrophoresis
PBS	phosphate buffered saline
PCR	polymerase chain reaction
PDE	phosphodiesterase
PDE4	phosphodiesterase isoform 4
PDI	protein disulfide isomerase
PERK	ER transmembrane protein kinase (UPR)

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PFA	paraformaldehyde
PIPES	piperazine-1,4-bis(2-ethanesulfonic acid)
PKA	protein kinase A
PMSF	phenylmethylsulfonyl fluoride
PNGase F	peptide-N-(N-acetyl- $\beta$ -glucosaminyl) asparagine amidase F
POD	horseradish peroxidase
RING	really interesting new gene
RNA	ribonucleic acid
RP	regulatory particle of the 26S proteasome
rpm	rotations per minute
Rpn	regulatory particle non-ATPase
Rpt	regulatory particle AAA ATPase
RT	room temperature
SDS	sodium dodecyl sulfate
SDS-PAGE	sodium dodecyl sulfate-polyacrylamide gel electrophoresis
Sec61	<i>Saccharomyces cerevisiae</i> protein 61
SEM	standard error of the mean
SRP	signal recognition particle
Taq	<i>Thermophilus aquaticus</i>
TEB4	ubiquitin ligase
TBS	Tris(hydroxymethyl)-aminomethan-buffered saline
TEMED	N,N,N',N'-tetramethylethylenediamine
Tris	Tris(hydroxymethyl)-aminomethan
Triton X-100	octylphenylpoly(ethylene glycol ether) <sub>n</sub>
UPR	unfolded protein response
V2R	V2 vasopressin receptor
V2 receptor	V2 vasopressin receptor
VCP	valosin-containing protein
VIMP	valosin-containing protein-interacting membrane protein

## List of amino acids and their abbreviations

A	Ala	alanine
C	Cys	cysteine
D	Asp	aspartic acid
E	Glu	glutamic acid
F	Phe	phenylalanine
G	Gly	glycine
H	His	histidine
I	Ile	isoleucine
K	Lys	lysine
L	Leu	leucine
M	Met	methionine
N	Asn	asparagine
P	Pro	proline
Q	Gln	glutamine
R	Arg	arginine
S	Ser	serine
T	Thr	threonine
V	Val	valine
W	Trp	tryptophan
Y	Tyr	tyrosine