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Datasheet for ABIN3132568  
**CD45 Protein (AA 24-1291) (rho-1D4 tag)**

### Overview

Quantity:	1 mg
Target:	CD45 (PTPRC)
Protein Characteristics:	AA 24-1291
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CD45 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

### Product Details

Sequence: QTPTPSDELS TTENALLLPQ SDPLPARTTE STPPSISERG NGSSETTYHP GVLSTLLPHL  
SPQPDSQTPS AGGADTQTFS SQADNPTLTP APGGGTDPGG VPGERTVPGT IPADTAFPVD  
TPSLARNSSA ASPHTHSNVS TTDISSGASL TTLTPSTLGL ASTDPPSTTI ATTTKQTCOA  
MFGNITVNYT YESSNQTFKA DLKDVQNAKC GNEDCENVLN NLEECSEQIKN ISVSNDS  
CAP ATTIDLYVPP GTDKFSLHDC TPKEKANTSI CLEWKTKNLD FRKCNSDNIS YVLHCEPENN  
TKCIRRNTFI PERCQLDNLR AQTNYTCVAE ILYRGVKLVK NVINVQTDLG IPETPKPSCG  
DPAARKTLVS WPEPVSKPES ASKPHGYVLC YKNNSEKCKS LPNNVTSFEV ESLKPYKYEE  
VSLLAYVNGK IQRNGTAEKC NFHTKADRPD KVNGMKTSRP TDNSINVTGCG PPYETNGPKT  
FYILVVRSGG SFVTKYNKTN CQFYVDNLYY STDYEFLVSF HNGVYEGDSV IRNESTNFNA  
KALIIFLVFL IIVTSIALLV VLYKIYDLRK KRSSNLDEEQ ELVERDDEKQ LMDVEPIHSD ILLETYKRKI  
ADEGRLFLAE FQSIPRVFSK FPIKDARKPH NQKNRYVDI LPYDYNRVEL SEINGDAGST  
YINASYIDGF KEPRKYIAAQ GPRDETVDDE WRMIWEQKAT VIVMVTTRCEE GNRNKCAEYW

PSMEEGTRAF KDIVVTINDH KRCPDYIIQK LNVAAHKKEKA TGREVTHIQF TSWPDHGVPE  
DPHLLLKLRR RVNAFSNFFS GPIVVHCSAG VGRTGTYIGI DAMLEGLEAE GKVDVYGYVV  
KLRRQRCLMV QVEAQYILIH QALVEYNQFG ETEVNLSELH SCLHNMKKRD PPSDPSPLEA  
EYQRLPSYRS WRTQHIGNQE ENKKKNRNSN VVPYDFNRVP LKHELEMSKE SEPESDESSD  
DDSDSEETSK YINASFVMSY WKPEMMIAAQ GPLKETIGDF WQMIFQRKVK VIVMLTELVN  
GDQEVCAQYW GEGKQTYGDM EVEMKDTNRA SAYTLRTFEL RHSKRKEPRT VYQYQCTTWK  
GEELPAEPKD LVSMIQDLKQ KLPKASPEGM KYHKHASILV HCRDGSQQTG LFCALFNLL  
SAETEDVVDV FQVVKSLRKA RPGVVCSYEQ YQFLYDIAS IYPAQNGQVK KTNSQDKIEF  
HNEVDGGKQD ANCVRPDGPL NKAQEDSRGV GTPEPTNSAE EPEHAANGSA SPAPTQSS

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Ptpcr Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

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### Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractionated by ultracentrifugation and subsequently solubilized with

## Product Details

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- different detergents (detergent screen). Samples are analyzed by Western blot.
- The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
  - Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.
Grade:	Crystallography grade

## Target Details

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Target:	CD45 (PTPRC)
Alternative Name:	Ptprc ( <a href="#">PTPRC Products</a> )
Background:	Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor. Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN (By similarity). Dephosphorylates LYN, and thereby modulates LYN activity. {ECO:0000250, ECO:0000269 PubMed:10415030}.
Molecular Weight:	143.3 kDa Including tag.
UniProt:	<a href="#">P06800</a>
Pathways:	<a href="#">TCR Signaling</a> , <a href="#">Regulation of Leukocyte Mediated Immunity</a> , <a href="#">Positive Regulation of Immune Effector Process</a> , <a href="#">Production of Molecular Mediator of Immune Response</a> , <a href="#">CXCR4-mediated Signaling Events</a> , <a href="#">BCR Signaling</a>

## Application Details

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Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the

## Application Details

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recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)