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Datasheet for ABIN3117928
2B4 Protein (AA 22-370) (rho-1D4 tag)

Overview

Quantity:	1 mg
Target:	2B4 (CD244)
Protein Characteristics:	AA 22-370
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This 2B4 protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence: CQGSADHVVS ISGVPLQLQP NSIQTKVDSI AWKLLPSQN GFHHILKWEN GSLPSNTSND
RFSFIVKNLS LLIKAAQQQD SGLYCLEVTS ISGKVQTATF QVVFESLLP DKVEKPRLLQ
QGKILDRGRC QVALSCLVSR DGNVSYAWYR GSKLIQTAGN LTYLDEEVDI NGHTHTYTCNV
SNPVSWESHT LNLQDCQNA HQEFRFPFL VIIVILSALF LGTLACFCVW RRRKRKEKQSE
TSPKEFLTIY EDVKDLKTRR NHEQEQTFFG GGSTIYSMIQ SQSSAPTSQE PAYTLYSLIQ
PSRKSGSRKR NHSPSFNSTI YEVIGKSQPK AQNPARLSRK ELENFDVVS

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

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
 - Human CD244 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).

Product Details

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.

Purification:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells: <ol style="list-style-type: none">1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.2. 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.3. 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.
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Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
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Sterility:	0.22 µm filtered
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Endotoxin Level:	Protein is endotoxin-free.
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Grade:	Crystallography grade
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Target Details

Target:	2B4 (CD244)
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Target Details

Alternative Name: CD244 ([CD244 Products](#))

Background: Heterophilic receptor of the signaling lymphocytic activation molecule (SLAM) family, its ligand is CD48. SLAM receptors triggered by homo- or heterotypic cell-cell interactions are modulating the activation and differentiation of a wide variety of immune cells and thus are involved in the regulation and interconnection of both innate and adaptive immune response. Activities are controlled by presence or absence of small cytoplasmic adapter proteins, SH2D1A/SAP and/or SH2D1B/EAT-2. Acts as activating natural killer (NK) cell receptor (PubMed:10359122, PubMed:8376943, PubMed:11714776). Activating function implicates association with SH2D1A and FYN (PubMed:15713798). Downstreaming signaling involves predominantly VAV1, and, to a lesser degree, INPP5D/SHIP1 and CBL. Signal attenuation in the absence of SH2D1A is proposed to be dependent on INPP5D and to a lesser extent PTPN6/SHP-1 and PTPN11/SHP-2 (PubMed:10934222, PubMed:15713798). Stimulates NK cell cytotoxicity, production of IFN-gamma and granule exocytosis (PubMed:8376943, PubMed:11714776). Optimal expansion and activation of NK cells seems to be dependent on the engagement of CD244 with CD48 expressed on neighboring NK cells (By similarity). Acts as costimulator in NK activation by enhancing signals by other NK receptors such as NCR3 and NCR1 (PubMed:10741393). At early stages of NK cell differentiation may function as an inhibitory receptor possibly ensuring the self-tolerance of developing NK cells (PubMed:11917118). Involved in the regulation of CD8(+) T-cell proliferation, expression on activated T-cells and binding to CD48 provides costimulatory-like function for neighboring T-cells (By similarity). Inhibits inflammatory responses in dendritic cells (DCs) (By similarity). {ECO:0000250|UniProtKB:Q07763, ECO:0000269|PubMed:10359122, ECO:0000269|PubMed:10741393, ECO:0000269|PubMed:10934222, ECO:0000269|PubMed:11714776, ECO:0000269|PubMed:11917118, ECO:0000269|PubMed:8376943, ECO:0000305|PubMed:15713798}.

Molecular Weight: 40.5 kDa Including tag.

UniProt: [Q9BZW8](#)

Application Details

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: In cases in which it is highly likely that the 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

Application Details

increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

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)