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Datasheet for ABIN3117117

SEMA4D/CD100 Protein (AA 22-862) (rho-1D4 tag)

Overview

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| Quantity: | 1 mg |
| Target: | SEMA4D/CD100 (SEMA4D) |
| Protein Characteristics: | AA 22-862 |
| Origin: | Human |
| Source: | Insect Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This SEMA4D/CD100 protein is labelled with rho-1D4 tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys) |

Product Details

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| Sequence: | MAFAPIPRIT WEHREVHLVQ FHEPDIYNYS ALLLSEDKDT LYIGAREAVF AVNALNISEK QHEVYWKVSE DKKAKCAEKG KSKQTECLNY IRVLQPLSAT SLYVCGTNAF QPACDHLNLT SFKFLGKNED GKGRCPFDPA HSYTSVMVDG ELYSGTSYNF LGSEPIISRN SSHSPLRTEY AIPWLNESPF VFADVIRKSP DSPDGEDDRV YFFTEVSVE YEFVFRVLIP RIARVCKGDQ GGLRTLQKKW TSFLKARLIC SRPDGLVFN VLRDVFVLR SGLKVPVFYA LFTPQLNNVG LSAVCAYNLS TAEVFSHGK YMQSTTVEQS HTKWVRYNGP VPKPRPGACI DSEARAANYT SSLNLPDKTL QFVKDHPLMD DSVTPIDNRP RLIKKDVNYT QIVVDRTQAL DGTVYDVMFV STDRGALHKA ISLEHAVHII EETQLFQDFE PVQTLLSSK KGNRFVYAGS NSGVVQAPLA FCGKHGTCED CVLARDPYCA WSPPTATCVA LHQTESPSRG LIQEMSGDAS VCPDKSKGSY RQHFFKHGGT AELKCSQKSN LARVFWKFQN GVLKAESPKY GLMGRKNLLI FNLSEGDSGV YQCLSEERVK NKTVFQVVAK HVLEVKVVPK PVVAPTLSVV QTEGSRIATK VLVASTQGSS PPTPAVQATS SGAILPPKP APTGTSCPEK IVINTVPQLH SEKTMYLKSS DNRLLSLFL |
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FFFVLFLCLF FYNCYKGYLP RQCLKFRSAL LIGKKKPKSD FCDREQSLKE TLVEPGSFSQ
QNGEHPKPAL DTGYETEQDT ITSKVPTDRE DSQRIDDLA RDKPFDVKCE LKFADSDADG D

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 SEMA4D 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.

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 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 chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Product Details

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| Sterility: | 0.22 µm filtered |
| Endotoxin Level: | Protein is endotoxin-free. |
| Grade: | Crystallography grade |

Target Details

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| Target: | SEMA4D/CD100 (SEMA4D) |
| Alternative Name: | SEMA4D (SEMA4D Products) |
| Background: | <p>Cell surface receptor for PLXN1B and PLXNB2 that plays an important role in cell-cell signaling. Promotes reorganization of the actin cytoskeleton and plays a role in axonal growth cone guidance in the developing central nervous system. Regulates dendrite and axon branching and morphogenesis. Promotes the migration of cerebellar granule cells and of endothelial cells. Plays a role in the immune system, induces B-cells to aggregate and improves their viability (in vitro). Promotes signaling via SRC and PTK2B/PYK2, which then mediates activation of phosphatidylinositol 3-kinase and of the AKT1 signaling cascade. Interaction with PLXNB1 mediates activation of RHOA. {ECO:0000269 PubMed:16055703, ECO:0000269 PubMed:19788569, ECO:0000269 PubMed:20877282, ECO:0000269 PubMed:8876214}.</p> |
| Molecular Weight: | 95.1 kDa Including tag. |
| UniProt: | Q92854 |
| Pathways: | Regulation of Cell Size |

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: | 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 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

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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) |