



[Go to Product page](#)

Datasheet for ABIN3118104  
**Sema4a Protein (AA 33-761) (rho-1D4 tag)**

### Overview

|                               |  |
|-------------------------------|--|
| Quantity:                     | 1 mg   |
| Target:                       | Sema4a   |
| Protein Characteristics:      | AA 33-761  |
| Origin:                       | Human  |
| Source:                       | Insect Cells   |
| Protein Type:                 | Recombinant  |
| Purification tag / Conjugate: | This Sema4a protein is labelled with rho-1D4 tag.                    |
| Application:                  | Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys) |

### Product Details

Sequence: GGGQGPMPRV RYYAGDERRA LSFFHQKGLQ DFDTLLLSGD GNTLYVGARE AILALDIQDP  
GVPRLKNMIP WPASDRKKSE CAFKKKSNET QCFNFIRVLV SYNVTHTLYTC GTFAFSPACT  
FIELQDSYLL PISEDKVMGEG KGQSPFDPAH KHTAVLVDGM LYSGMTMNNFL GSEPILMRTL  
GSQPVLKTDN FLRWLHHDAS FVAaipstqV VYFFFEETAS EFDFFERLHT SRVARVCKND  
VGGEKLLQKK WTTFLKAQLL CTQPGQLPFN VIRHAVLLPA DSPTAPHIYA VFTSQWQVGG  
TRSSAVCAFS LLDIERVFKG KYKELNKETS RWTTYRGPET NPRPGSCSVG PSSDKALTFM  
KDHFLMDEQV VGTPLLKSG VEYTRLAVET AQGLDGHSHL VMYLGTTTGS LHKAVVSGDS  
SAHLVEEIQ LFPDPEPVRNL QLAPTQGAVF VGFSGGVWRV PRANCSVYES CVDCVLARDP  
HCAWDPEsRT CCLLSAPNLN SWKQDMERGN PEWACASGPM SRSLRPQSRP QIIKEVLAVP  
NSILELPCPH LSALASYYS HGPAAVPEAS STVYNGSLLL IVQDGVGGLY QCWATENGFS  
YPVISYWVDS QDQTLALDPE LAGIPREHVK VPLTRVSGGA ALAAQSYWP HFVTVTVLFA  
LVLSGALIL VASPLRALRA RGKVQGCETL RPGEKAPLSR EQHLQSPKEC RTSASDVAD

NNCLGTEVA

**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.
- Human SEMA4A 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 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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## Product Details

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Endotoxin Level: Protein is endotoxin-free.

Grade: Crystallography grade

## Target Details

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Target: Sema4a

Alternative Name: SEMA4A ([Sema4a Products](#))

Background: Cell surface receptor for PLXNB1, PLXNB2, PLXNB3 and PLXND1 that plays an important role in cell-cell signaling. Plays a role in priming antigen-specific T-cells, promotes differentiation of Th1 T-helper cells, and thereby contributes to adaptive immunity. Promotes phosphorylation of TIMD2. Inhibits angiogenesis. Promotes axon growth cone collapse. Inhibits axonal extension by providing local signals to specify territories inaccessible for growing axons (By similarity). {ECO:0000250}.

Molecular Weight: 81.3 kDa Including tag.

UniProt: [Q9H3S1](#)

## 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.

## Handling

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Expiry Date: Unlimited (if stored properly)