



[Go to Product page](#)

Datasheet for ABIN3114717  
**SEMA5A Protein (AA 23-1074) (rho-1D4 tag)**

### Overview

Quantity:	1 mg
Target:	SEMA5A
Protein Characteristics:	AA 23-1074
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SEMA5A protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

### Product Details

Sequence: EAQGTTCQQR TEHPVISYKE IGPWLREFRA KNAVDFSQLT FDPGQKELVV GARNYLFRLQ  
LEDLSLIQAV EWECDEATKK ACYSKGKSKE ECQNYIRVLL VGGDRLFTCG TNAFTPVCTN  
RSLSNLTEIH DQISGMARCP YSPQHNSTAL LTAGGELYAA TAMDFPGRDP AIYRSLGILP  
PLRTAQYNSK WLNPNFVSS YDIGNFTYFF FRENAVEHDC GKTVFSRAAR VCKNDIGGRF  
LLEDTWTTFM KARLNCSRPG EVPFYYNELQ STFFLPELDL IYGIFTTNVN SIAASAVCVF  
NLSAIAQAFS GPFKYQENSR SAWLPYPNPN PHFQCGTVDQ GLYVNLTERN LQDAQFILM  
HEVVQPVTTV PSFMEDNSRF SHVAVDVVQG REALVHIIYL ATDYGTIKKV RVPLNQTSSS  
CLLEEIELFP ERRREPIRSL QILHSQSVLF VGLREHVVKI PLKRCQFYRT RSTCIGAQDP  
YCGWDVVMKK CTSLEESLSM TQWEQSISAC PTRNLTVDGH FGWVSPWTPC THTDGSAVGS  
CLCRTRSCDS PAPQCGGWQC EPGGMEIANC SRNGGWTPWT SWSPCSTTCG IGFQVRQRSC  
SNPTPRHGGR VCVGQNREER YCNEHLLCPP HMFWTGWGPW ERCTAQC GGG IQARRRICEN  
GPDCAGCNVE YQSCNTNPCP ELKKTTPWTP WTPVNI SDNG GHYEQRFRYT CKARLADPNL

LEVGRQRIEM RYCSSDGTSG CSTDGLSGDF LRAGRYSAHT VNGAWSAWTS WSQCSRDCSR  
GIRNRKRVCN NPEPKYGGMP CLGPSLEYQE CNILPCPVDG VWSCWSPWTK CSATCGGGHY  
MRTRSCSNPA PAYGGDICLG LHTEALCNT QPCPEWSEW SDWSECEASG VQVRARQCIL  
LFPMGSQCSG NTTESRPCVF DSNFIPEVSV ARSSVVEEKR CGEFNMFHMI AVGLSSSILG  
CLLTLVYTY CQRYQQSHD ATVIHPVSPA PLNTSITNHI NKLDKYDSVE AIKAFNKNL  
ILEERNKYFN PHLTGKTYSN AYFTDLNNYD EY

**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 SEMA5A 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

## Product Details

---

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.

---

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

---

Target: SEMA5A

---

Alternative Name: SEMA5A ([SEMA5A Products](#))

---

Background: Bifunctional axonal guidance cue regulated by sulfated proteoglycans, attractive effects result from interactions with heparan sulfate proteoglycans (HSPGs), while the inhibitory effects depend on interactions with chondroitin sulfate proteoglycans (CSPGs) (By similarity). Ligand for receptor PLXNB3. In glioma cells, SEMA5A stimulation of PLXNB3 results in the disassembly of F-actin stress fibers, disruption of focal adhesions and cellular collapse as well as inhibition of cell migration and invasion through ARHGDI A-mediated inactivation of RAC1. May promote angiogenesis by increasing endothelial cell proliferation and migration and inhibiting apoptosis. {ECO:0000250, ECO:0000269|PubMed:15218527, ECO:0000269|PubMed:19850054, ECO:0000269|PubMed:20696765, ECO:0000269|PubMed:21706053}.

---

Molecular Weight: 119.3 kDa Including tag.

---

UniProt: [Q13591](#)

## 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 increase solubility. We will discuss all possible options with you in detail to assure that you

## Application Details

---

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)

---