

Semaphorin 3A, human recombinant protein
SEMA3A, SEMAD
Catalog # PBV10831r**Specification****Semaphorin 3A, human recombinant protein - Product info**

Primary Accession [Q14563](#)
Calculated MW ~90 kDa kDa

Semaphorin 3A, human recombinant protein - Additional Info

Gene ID **10371**
Gene Symbol **SEMA3A**
Other Names
SEMA3A, SEMAD

Gene Source **Human**
Source **CHO cells**
Assay&Purity **SDS-PAGE; ≥95%**
Assay2&Purity2 **HPLC;**
Recombinant **Yes**
Sequence **NYQNGKNNVP RLKLSYKEML ESNNVITFNG
LANSSSYHTF LLDEERSRLY VGAKDHIFS
DLVNIKDFQK IVWPVSYTRR DECKWAGKDI
LKECANFIKV LKAYNQTHLY ACGTGAFHPI
CTYIEIGHHP EDNIFKLENS HFENGRGKSP
YDPKLLTASL LIDGELYSGT AADFMGRDFA
IFRTLGHHP IRTEQHDSRW LNDPKFISAH
LISEDNPED DKVYFFREN AIDGEHSGKA
THARIGQICK NDFGGHRSV NKWTTFLKAR
LICSVPGPNG IDTHFDELQD VFLMNFKDPK
NPVVYGVFTT SSNIFKGSV CMYSMSDVRR
VFLGPYHRD GPYQWVPYQ GRVPYPRPGT
CPSKTFGGFD STKDLRDDVI TFAHSHAPY
NPVFPNNRP IVIKTDVNYQ FTQIVVDRVD
AEDGQYDVMF IGTDVGTVLK VVSIPKETWY
DLEEVLLLEEM TVFREPTAIS AMELSTKQQQ
LYIGSTAGVA QLPLHRCDIY GKACAECCLA
RDPYCAWDGS ACSRYFPTAK RRTRRQDIRN
GDPLTHCSDL HHDNHHGHSP EERIIYGVEN
SSTFLECSPK SQRALVYWQF QRRNEERKEE
IRVDDHIIRT DQGLLLRSLQ QKDSGNYLCH
AVEHGFQITL LKVTLEVIDT EHLEELLHKD
DDGDGSKTKE MSNSMTPSQK VWYRDFMQLI
NHPNLNTMDE FCEQVWKRDR KQRRQRPQHT
PGNSNKWKHL QENKKGRNRR THEFERAPRS
V**

Target/Specificity
Semaphorin 3A

Application Notes

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. This solution can be stored at 2-8°C for up to 1 week. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Format

Lyophilized powder

Storage

-20°C; Sterile filtered through a 0.2 micron filter. Lyophilized from 10 mM Sodium Phosphate, pH 7.5

Semaphorin 3A, human recombinant protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Semaphorin 3A, human recombinant protein - Images**Semaphorin 3A, human recombinant protein - Background**

Semaphorins are a large group of structurally related secreted, GPI-anchored and transmembrane cell signaling molecules. There are 8 major classifications (1-7) of Semaphorins characterized by the existence of a conserved 500 amino acid SEMA domain at the amino terminus. Classes 3, 4, 6, and 7 are found in vertebrates only, whilst class 5 is found in both vertebrates and invertebrates. Each class is then divided into additional subgroups based on shared structural characteristics. Semaphorins primarily function as axon growth cone guidance factors during neuronal development. Semaphorin 3A acts as a chemo-repellent to axons, and an inhibitor of the growth of axons by signaling through receptors, Neuropilin-1 and Plexin-A. Recombinant human Semaphorin 3A is a 751 amino acid protein containing the SEMA domain, an immunoglobulin c2-like domain and a basic domain (Arg/Lys rich) near the C-terminus.

Semaphorin 3A, human recombinant protein - References

Kolodkin A.L., et al. Cell 75:1389-1399(1993).
Hillier L.W., et al. Nature 424:157-164(2003).
Young J., et al. Hum. Reprod. 27:1460-1465(2012).
Sjoeblom T., et al. Science 314:268-274(2006).
Varela I., et al. Nature 469:539-542(2011).