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**Product Data Sheet**


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Product Name: SEMA7A Human  
 Cat. No.: GP24520  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Sf9, Insect cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Semaphorin-7A; CDw108; JMH blood group antigen; John-Milton-Hargen human blood group Ag; Semaphorin-K1; Sema K1; Semaphorin-L; Sema L; CD108.		
Amino Acid Sequence	<p>ADPQGHRLRSG PRIFAVWKGH VGQDRVDFGQ TEPHTVLFHE PGSSSVWVGG          RGKVYLFDFP EGKNASVRTV NIGSTKGSCL DKRDCENYIT LLERRSEGLL          ACGTNARHPS CWNLVNGTVV PLGEMRGYAP FSPDENSLVL FEGDEVYSTI          RKQEYNGKIP RFRRIRGESE LYSDTVMQN PQFIKATIVH QDQAYDDKIY          YFFREDNPK NPEAPLNVS R VAQLCRGDQG GESSLSVSKW NTFLKAMLVC          SDAATNKNFN RLQDVFLLPD PSGQWRDTRV YGVFSNPWNY SAVCVYSLGD          IDKVFRTSSL KGYHSSLPNP RPGKCLPDQQ PIPTETFQVA DRHPEVAQRV          EPMGPKTPL FHSKYHYQKV AVHRMQASHG ETFHVLYLTT DRGTIHKVVE          PGEQEHSFAF NIMEIQPFRR AAAIQTMSLD AERRKLYVSS QWEVSQVPLD          LCEVYGGGCH GCLMSRDPYC GWDQGRCSI YSSERSVLQS INPAEPHKEC          PNPKPKAPL QKVSLAPNSR YYLSCPMESR HATYSWRHKE NVEQSCEPGH          QSPNCILFIE NLTAQQYGHY FCEAQEGSYF REAQHWQLLP EDGIMAEHLL          GHACALALEP KSCDKTHTCP PCPAPELLGG PSVFLFPPKP KDTLMIS RTP          EVTCVVVDVS HEDPEVKFNW YVDGVEVHNA KTKPREEQYN STYRVVSVLT          VLHQDWLNGK EYKCKVSNKA LPAPIEKTIS KAKGQPREPQ VYTLPPSRDE          LTKNQVSLTC LVKGFYPSDI AVEWESNGQP ENNYKTTTPV LDSDGSFFLY          SKLTVDKSRW QQGNVFSCSV MHEALHNHYT QKSLSLSPGK HHHHHH.</p>		
Formulation	SEMA7A protein solution (0.25mg/ml) contains Phosphate Buffered Saline (pH 7.4) and 10% glycerol.		

**Introduction**

SEMA7A (semaphorin-7A isoform 1), is a membrane-bound semaphorin which is linked

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Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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with cell surfaces via a glycosylphosphatidylinositol (GPI) linkage. SEMA7A encourages formation of focal adhesion complexes, activation of the protein kinase PTK2/FAK1 and subsequent phosphorylation of MAPK3 & MAPK1. SEMA7A takes a vital part in integrin-mediated signaling and functions in regulating cell migration as well as immune responses. In addition, SEMA7A promotes the production of proinflammatory cytokines by macrophages & monocytes.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

SEMA7A produced in Sf9 Insect cells is a single, glycosylated polypeptide chain containing 846 amino acids (45-648 a.a.) and having a molecular mass of 95.7kDa (Molecular size on SDS-PAGE will appear at approximately 70-100kDa). SEMA7A is expressed with an 242 amino acid HlgG-His tag at C-Terminus and purified by proprietary chromatographic techniques.

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