

## Semaphorin-7A/SEMA7A Protein, Human (HEK293, His)

Cat. No.:	HY-P78033
Synonyms:	Semaphorin-7A; Semaphorin-K1; Semaphorin-L; Sema L; CD108; CD108MGC126696; CDw108; H-SEMA-K1; H-Sema-L; JMH; MGC126692; Sema7A; SEMAK1; SEMAL
Species:	Human
Source:	HEK293
Accession:	O75326 (Q45-A648)
Gene ID:	8482
Molecular Weight:	70-75 kDa

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	The Semaphorin-7A (SEMA7A) protein assumes a crucial role in integrin-mediated signaling, exerting its influence on diverse cellular functions that include the regulation of cell migration and immune responses. SEMA7A actively promotes the formation of focal adhesion complexes, activating protein kinase PTK2/FAK1 and subsequently inducing the phosphorylation of MAPK1 and MAPK3. Furthermore, it plays a significant role in orchestrating the production of pro-inflammatory cytokines by monocytes and macrophages, thereby modulating inflammation and T-cell-mediated immune responses. In developmental contexts, SEMA7A is implicated in promoting axon growth in the embryonic olfactory bulb and facilitates attachment, spreading, and dendrite outgrowth in melanocytes. Its intricate molecular interactions involve associations with integrins ITGA1 and ITGB1, suggesting its involvement in mediating cell adhesion, and it interacts with PLXNC1, adding to the complexity of its regulatory role in diverse cellular processes.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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