

## Semaphorin-4D/SEMA4D Protein, Human (HEK293, hFc)

Cat. No.:	HY-P74565
Synonyms:	SEMA4D; Semaphorin-4D; M-Sema G; Semaphorin-C-like 2; Sema J; CD100; Semac12
Species:	Human
Source:	HEK293
Accession:	Q92854 (M1-R734)
Gene ID:	10507
Molecular Weight:	Approximately 105.95 kDa

### PROPERTIES

Appearance	Solution
Formulation	Supplied as a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

Background	Semaphorin-4D/SEMA4D Protein, a cell surface receptor for PLXNB1 and PLXNB2, plays a crucial role in cell-cell signaling. It is involved in regulating GABAergic synapse development and promotes the development of inhibitory synapses in a PLXNB1-dependent manner. By activating PLXNB1 and interacting with it, SEMA4D modulates the complexity and arborization of developing neurites in hippocampal neurons, mediating the activation of RHOA. Additionally, SEMA4D promotes the migration of cerebellar granule cells and induces B-cells to aggregate, enhancing their viability in vitro. In the immune system, SEMA4D plays a role in inducing endothelial cell migration through the activation of PTK2B/PYK2, SRC, and the phosphatidylinositol 3-kinase-AKT pathway. It forms homodimers and interacts with PLXNB2, as well as interacts with PLXNB1.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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