

## Semaphorin-4D/SEMA4D Protein, Rhesus Macaque (HEK293, His)

Cat. No.:	HY-P77194
Synonyms:	SEMA4D; Semaphorin-4D; M-Sema G; Semaphorin-C-like 2; Sema J; CD100; Semacl2
Species:	Rhesus Macaque
Source:	HEK293
Accession:	EHH24221.1 (M1-R734)
Gene ID:	/
Molecular Weight:	Approximately 80.7 kDa.

### PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants 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.
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	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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