

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

<b>Cat. No.:</b>	HY-P74561
<b>Synonyms:</b>	SEMA4D; Semaphorin-4D; M-Sema G; Semaphorin-C-like 2; Sema J; CD100; Semacl2
<b>Species:</b>	Rat
<b>Source:</b>	HEK293
<b>Accession:</b>	NP_001164034.1 (F24-M712)
<b>Gene ID:</b>	306790
<b>Molecular Weight:</b>	Approximately 95-115 kDa due to the glycosylation

### PROPERTIES

#### AA Sequence

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F A P V P R I T W E   H G E V G L V K F H   E P G I F N Y S S L   L M S E D K D T L Y
V G A R E A V F A V   N A L D I S E K Q H   E V Y W K V S E D K   K S K C A E K G K S
K Q T E C L N Y I R   V L Q P L S S T S L   Y V C G T N A F Q P   T C D H L N L T S F
K F L G K S E D G K   G R C P F D P A H S   Y T S V M V G G E L   Y S G T S Y N F L G
S E P I I S R N S S   H S P L R T E Y A I   P W L N E P S F V F   A D V I H K S P D G
T E A E D D K V Y F   F F T E V S V E Y E   F V F K L M I P R V   A R V C K G D Q G G
L R T L Q K K W T S   F L K A R L I C S R   P D S G L V F N I L   Q D V F V L R A P G
L K E P V F Y A V F   T P Q L N N V G L S   A V C A Y T L S T V   E A V F S R G K Y M
Q S A T V E Q S H T   K W V R Y N G P V P   T P R P G A C I D S   E A R A A N Y T S S
L N L P D K T L Q F   V K D H P L M D D S   V T P I D N R P K L   I K K D V N Y T Q I
V V D R T Q A L D G   T F Y D V M F L S T   D R G A L H K A V I   L A K E V H V V E E
T Q L F Q D F E P V   L S L L L S S K K G   R K F V Y A G S N S   G V V Q A P L A F C
G K H S S C E D C V   L A R D P Y C A W S   P A I K A C V T L H   Q A E G S S R G W I
Q D M S G D T S S C   L D K S K E S F H Q   H F F K H G G T A E   L K C F Q K S N L A
R V V W K F Q N G E   L K A V S P K Y G F   V G R K H L L I F N   L S D G D S G V Y Q
C L S E E R V R N K   T V S Q L L A K H I   L E V K M V A R I P   P S P T S Q T A Q T
E G S R I T S K M P   V A S T Q G S S P P   T P A L W A T S P R   A A T L P P K S S S
T G T S C E P K M

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<b>Biological Activity</b>	Measured by its ability to inhibit survival of SKOV3 human ovarian carcinoma cells. The ED <sub>50</sub> for this effect is 1.211 µg/mL, corresponding to a specific activity is 825.8 U/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	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**

Semaphorin-4D (SEMA4D) is predicted to possess identical protein binding activity, signaling receptor binding activity, and transmembrane signaling receptor activity. Its involvement in various processes, including negative regulation of osteoblast differentiation, regulation of neuron projection development, and regulation of phosphate metabolic processes, underscores its diverse functions. SEMA4D is anticipated to act upstream of or within the positive regulation of axonogenesis, suggesting a role in neuronal development. The predicted activity in the extracellular space and its status as an integral component of the plasma membrane further emphasize its potential significance in intercellular communication. With biased expression observed in tissues such as the spleen, thymus, and nine other tissues, SEMA4D's intricate involvement in cellular processes and its potential impact on tissue-specific functions become areas of interest for further exploration.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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