

Product Data Sheet

PLXNA1 Protein, Human (HEK293, His)

Cat. No.:	HY-P700812
Synonyms:	Plexin A1, Semaphorin receptor NOV, NOV, PLXN1
Species:	Human
Source:	HEK293
Accession:	Q9UIW2 (E27-P1244)
Gene ID:	5361
Molecular Weight:	140-155 kDa

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PROPERTIES	
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 $\mu\text{g}/\text{mL}$ in ddH2O.
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	PLXNA1 protein serves as a coreceptor for SEMA3A, SEMA3C, SEMA3F, and SEMA6D, playing an essential role in signaling class 3 semaphorins and subsequent cytoskeleton remodeling. It is integral to processes such as axon guidance, invasive growth, and cell migration. In the presence of class 3 semaphorins, PLXNA1 forms a complex with a neuropilin, and this interaction modulates the affinity of the complex for specific semaphorins. The cytoplasmic domain of PLXNA1 is crucial activating downstream signaling events within the cytoplasm. Notably, the protein interacts directly with neuropilins NF and NRP2, and it also engages with FARP2, RND1, and KDR/VEGFR2. The binding of SEMA3A to PLXNA1 leads to the dissociation of FARP2, highlighting the intricate regulatory role of PLXNA1 in semaphorin-mediated cellular responses.

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

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