

## Podoplanin Protein, Human (HEK293, His)

Cat. No.:	HY-P71218
Synonyms:	Podoplanin; Aggrus; Glycoprotein 36; Gp36; PA2.26 Antigen; T1-Alpha; T1A; PDPN; GP36
Species:	Human
Source:	HEK293
Accession:	Q86YL7 (A23-L131)
Gene ID:	10630
Molecular Weight:	20-30 kDa

### PROPERTIES

AA Sequence	<p>A S T G Q P E D D T    E T T G L E G G V A    M P G A E D D V V T    P G T S E D R Y K S</p> <p>G L T T L V A T S V    N S V T G I R I E D    L P T S E S T V H A    Q E Q S P S A T A S</p> <p>N V A T S H S T E K    V D G D T Q T T V E    K D G L S T V T L</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.2.
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	<p>Podoplanin Protein emerges as a multifaceted regulator, exerting diverse effects on cell migration and adhesion through interactions with various partners. During development, Podoplanin plays a crucial role in the separation of blood and lymphatic vessels by binding to CLEC1B, triggering platelet activation and aggregation. Conversely, its interaction with CD9 attenuates platelet aggregation induced by Podoplanin. The protein, through interactions with MSN or EZR, promotes epithelial-mesenchymal transition (EMT), leading to increased cell migration and invasiveness. Binding with CD44 facilitates directional cell migration in epithelial and tumor cells. In lymph nodes, Podoplanin controls fibroblastic reticular cells (FRCs) adhesion to the extracellular matrix (ECM) and actomyosin contraction by maintaining ERM proteins (EZR, MSN, and RDX) and MYL9 activation. Engagement with CLEC1B promotes FRC relaxation by blocking lateral membrane interactions. Podoplanin also participates in connecting the lymphatic endothelium to the surrounding ECM through its interaction with</p>
------------	--

---

LGALS8. In keratinocytes, Podoplanin induces morphological changes, increased motility, and decreased cell adhesion. Furthermore, Podoplanin regulates invadopodia stability and maturation in tumor cells, contributing to efficient ECM degradation. The protein is homodimeric and interacts with a range of partners, including CLEC1B, CD9, LGALS8, CD44, MSN, EZR, and CCL21, showcasing its intricate involvement in various cellular processes and signaling pathways. Further research is crucial to unravel the precise molecular mechanisms and broader implications of Podoplanin in these diverse cellular functions.

---

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA