

Syndecan-1 Protein, Human, Recombinant (His & Avi)

General Information

Synonyms:	SYND1;syndecan;syndecan 1;Syndecan-1;CD138;SDC
Protein Construction:	A DNA sequence encoding the Human SDC1 (NP_002988.3) (Met1-Glu251) was expressed with a C-terminal polyhistidine tag followed by an AVI tag. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed. Predicted N terminal: Gln 18
Species:	Human
Expression Host:	HEK293 Cells
Accession:	NP_002988.3
Molecular Weight:	27.38 kDa (predicted); 59.94 kDa and 51.94 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	≥ 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Syndecan-1 also known as SDC1 and CD138, is the most extensively studied member of the syndecan family. It is found mainly in epithelial cells, but its expression is developmentally regulated during embryonic development. Syndecan-1/SDC1/CD138 has been shown to mediate cell adhesion to several ECM molecules, and to act as a

coreceptor for fibroblast growth factors, potent angiogenic growth factors involved also in differentiation. Syndecan-1/SDC1/CD138 expression is reduced during malignant transformation of various epithelia, and this loss correlates with the histological differentiation grade of squamous cell carcinomas, lacking from poorly differentiated tumours. In squamous cell carcinomas of the head and neck, positive syndecan-1 expression correlates with a more favourable prognosis. Experimental studies on the role of Syndecan-1 in malignant transformation have shown that Syndecan-1/SDC1/CD138 expression is associated with the maintenance of epithelial morphology, anchorage-dependent growth and inhibition of invasiveness in vitro.

Reference

- Inki P, et al. (1996) The role of syndecan-1 in malignancies. *Ann Med.* 28(1): 63-7.
- Subramanian SV, et al. (1997) Regulated shedding of syndecan-1 and -4 ectodomains by thrombin and growth factor receptor activation. *J Biol Chem.* 272(23): 14713-20.
- Park PW, et al. (2001) Exploitation of syndecan-1 shedding by *Pseudomonas aeruginosa* enhances virulence. *Nature.* 411(6833): 98-102.

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