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### Syndecan-4 Human Recombinant RECOMBINANT PROTEIN

**Catalog Number:** PRP-583  
**Quantity:** 10 micrograms, 50 micrograms, 1 milligram  
**Format:** Sterile Filtered White lyophilized (freeze-dried) powder.  
**Host:** *Escherichia Coli*

#### **Background:**

Syndecan-4 is a type I integral membrane heparan sulfate proteoglycan (HSPG), which was originally isolated from cloned rat microvascular endothelial cells as an antithrombin-binding molecule, and is now known to be a member of the syndecan family. Syndecan-4 binds to basic fibroblast growth factor (bFGF), midkine, and tissue factor pathway inhibitor via its heparan sulfate chains, and is thought to be involved in various biologic functions such as signaling of bFGF, anticoagulation, and focal adhesion formation. A previous study demonstrated that syndecan-4 is expressed in various tissues, and its level of expression in the kidney is stronger than those of other syndecan family members. Thus, syndecan-4 is thought to play certain roles in maintaining renal function. Moreover, it has been reported that proteoglycans, especially sulfated proteoglycans, are involved in organogenesis of the kidney.

#### **Specificity and Preparation:**

Syndecan-4 Human Recombinant fused with 6X His tag produced in *E.Coli* is a single, non-glycosylated, polypeptide chain containing 140 amino acids and having a molecular mass of 15.4 kDa. The SYND-4 is purified by proprietary chromatographic techniques. Purity is >95.0% as determined by RP-HPLC and SDS-PAGE. The SYND4 (1 mg/ml) was lyophilized after extensive dialyses against 20mM PBS pH-7.4. The amino acid sequence is:

MASIRETEVIDPQDLLEGRYFSGALPDDEDVVGPGQESDDFELSGSGDLDDLEDSMIGPEVVHPLVPLD  
NHIPERAGSGSQVPTEPKKLEENEVIPKRISPVEESEDVSNKVSMSSTVQGSNIFERTEVLALEHHHHHH

#### **Usage and Storage:**

It is recommended to reconstitute the lyophilized SYND-4 in sterile 18M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions. Lyophilized SYND-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution SYND-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid freeze-thaw cycles. This material is provided for LABORATORY RESEARCH USE ONLY.