# Recombinant Human Jagged 1/JAG1 Protein (His Tag)

**Catalog Number: PKSH031043**

**Note:** *Centrifuge before opening to ensure complete recovery of vial contents.*

## Description

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|---|---|
| **Species** | Human |
| **Source** | HEK293 Cells-derived Human Jagged 1/JAG1 protein Met 1-Ser 1046, with an C-terminal His |
| **Calculated MW** | 112 kDa |
| **Accession** | NP_000205.1 |
| **Bio-activity** | Measured by the ability of the immobilized protein to enhance BMP2-induced alkaline phosphatase activity in C3H10T1/2 mouse embryonic fibroblast cells. The $ED_{50}$ for this effect is typically 4-20 μg/mL. |

## Properties

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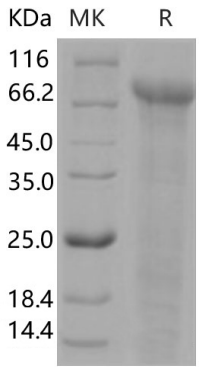
|---|---|
| **Purity** | > 85 % as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU per μg of the protein as determined by the LAL method. |
| **Storage** | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months. |
| **Shipping** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4<br>Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.<br>Please refer to the specific buffer information in the printed manual. |
| **Reconstitution** | Please refer to the printed manual for detailed information. |

## Data




> 85 % as determined by reducing SDS-PAGE.

## Background

Protein Jagged 1, also known as JAG1, JAGL1 and CD339, is a single-pass type I membrane protein which contains 1DSL domain and 15EGF-like domains. JAG1/Jagged 1 is widely expressed in adult and fetal tissues. The expression of JAG1/Jagged 1 is up-regulated in cervical squamous cell carcinoma. JAG1/Jagged 1 is also expressed in bone marrow cell line HS-27a which supports the long-term maintenance of immature progenitor cells. JAG1/Jagged 1 is a ligand for multiple Notch receptors. It is involved in the mediation of Notch signaling. JAG1/Jagged 1 may be involved in cell-fate decisions during hematopoiesis. JAG1/Jagged 1 seems to be involved in early and late stages of mammalian cardiovascular development. It inhibits myoblast differentiation and enhances fibroblast growth factor-induced angiogenesis. Defects in JAG1/Jagged 1 are the cause of Alagille syndrome type 1 (ALGS1). Alagille syndrome is an autosomal dominant multisystem disorder defined clinically by hepatic bile duct paucity and cholestasis in association with cardiac, skeletal, and ophthalmologic manifestations. Defects in JAG1/Jagged 1 are also a cause of tetralogy of Fallot (TOF). TOF is a congenital heart anomaly which consists of pulmonary stenosis, ventricular septal defect, dextroposition of the aorta ( aorta is on the right side instead of the left) and hypertrophy of the right ventricle. This condition results in a blue baby at birth due to inadequate oxygenation.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