Recombinant Human Jagged 1/JAG1 Protein (His Tag)

Catalog Number: PKSH031043

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

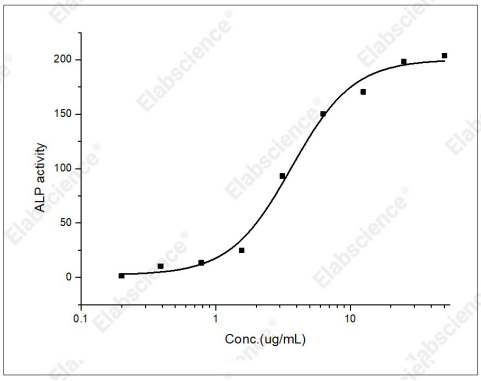
Description

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

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°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C 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 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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 1.5-15 μg/mL.

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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