

Human JAG1 / Jagged 1 / CD339 Protein (Fc Tag)

Catalog Number: 11648-H02H



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Biological Solution Specialist

General Information

Gene Name Synonym:

AGS; AHD; AWS; CD339; HJ1; Jagged 1; JAGL1; ABE2; Gsfabe2; Htu; Ozz; Ser-1

Protein Construction:

A DNA sequence encoding the human JAG1 (NP_000205.1) extracellular domain (Met 1-Ser 1046) was fused with Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 85 % as determined by SDS-PAGE

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 ED₅₀ for this effect is typically 5-30 µg/mL.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gln 34

Molecular Mass:

The recombinant human JAG1/Fc is a disulfide-linked homodimer. The reduced monomer consists of 1254 amino acids and has a predicted molecular mass of 137 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh JAG1/Fc monomer is approximately 180-200 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

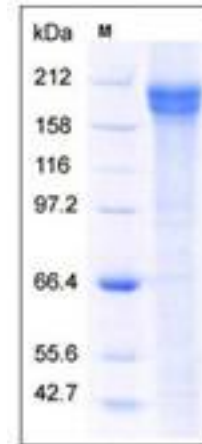
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Protein Jagged 1, also known as JAG1, JAGL1 and CD339, is a single-pass type I membrane protein which contains 1 DSL domain and 15 EGF-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.

References

JAG1 / Jagged 1 Related Studies

- 1.Oda T.et al., 1997, Nat. Genet. 16:235-242.
- 2.Krantz I.D. et al., 1998, Am. J. Hum. Genet. 62:1361-1369.
- 3.Li L. et al., 1998, Immunity. 8:43-55.

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