

Product Information

Anti-Jagged-1

produced in goat, affinity isolated antibody

Catalog Number **J4127**

Product Description

Anti-Jagged-1 is produced in goat using purified recombinant rat jagged-1 extracellular domain expressed in mouse NSO cells as immunogen. The antibody is purified using rat jagged-1 affinity chromatography.

Anti-Jagged-1 may be used to localize and detect jagged-1 by immunoblotting, ELISA, and flow cytometry.

Jagged-1 is a notch ligand. The Notch signaling system regulates proliferation, differentiation and apoptosis in many tissues, including hematopoietic tissue.¹ Notch is a family of transmembrane receptors activated by ligands such as jagged-1, jagged-2 and delta-1 that are expressed on adjacent cells. Hematopoietic stem cells and early progenitors express notch-1 and notch-2, whereas primary stromal cultures have been shown to express jagged-1, indicating that jagged-1 may play a role in nurturing progenitor cells within the hematopoietic microenvironment.² Cells engineered to express high levels of jagged-1 caused a four-fold increase in formation of hematopoietic progenitor cell colonies.³ However, without the presence of other cytokines that stimulate proliferation and maturation, such as IL-3, IL-6, SCF and G-CSF, jagged-1 actually decreased myeloid colony formation by CD34⁺ cells, suggesting that jagged-1 modulates cytokine signals and helps preserve CD34⁺ cells in an immature state.⁴

Reagent

Supplied as a lyophilized powder from a 0.2 µm filtered solution of phosphate buffered saline (PBS), pH 7.4, and 5% trehalose.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm-filtered PBS to produce a 0.1 mg/ml stock solution of antibody. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at -20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing

Product Profile

Capture ELISA: a working concentration of 0.2-0.8 µg/ml is recommended.

Immunoblotting: a working concentration of 0.1 µg/ml is determined using rat jagged-1 at 5 ng/lane under non-reducing conditions.

Flow cytometry: recommended use: 2.5 µg/10⁶ cells using rat cortical stem cells.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working dilutions by titration.

Endotoxin level is < 0.1 EU per 1 µg of antibody as determined by the LAL (Limulus ameocyte lysate) method.

References

1. Miele, L., and Osborne, B., Arbiter of differentiation and death: Notch signaling meets apoptosis, *J. Cell. Physiol.*, **181**, 393-409 (1999).
2. Varnum-Finney, B., et al., The notch ligand, jagged-1, influences the development of primitive hematopoietic precursor cells, *Blood*, **91**, 4084-4091 (1998).
3. Jones, P., et al., Stromal expression of Jagged-1 promotes colony formation by fetal hematopoietic progenitor cells, *Blood*, **92**, 1505-1511 (1998).
4. Walker, L., et al., The Notch Jagged pathway inhibits proliferation of human hematopoietic progenitors *in vitro*, *Stem Cells*, **17**, 162-171 (1999)

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