Human/Mouse Jagged 1/Jagged 2 PE-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 241002

Catalog Number: FAB1726P

100 TESTS

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Stains human Jagged 1 and Jagged 2 transfectants but not the parental cell line by flow cytometry. Detects endogenous human and mouse Jagged 1 and Jagged 2 by flow cytometry.
Source	Monoclonal Mouse IgG_{2B} Clone # 241002
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Jagged 2 Met27-Asp307 Accession # Q9Y219
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

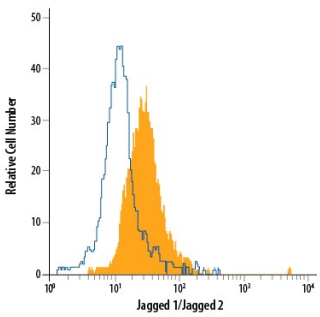
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	10 µL/10^6 cells	See Below

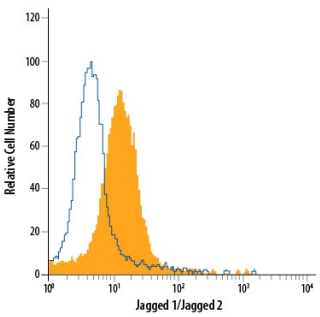
DATA

Flow Cytometry



Detection of Jagged 1/Jagged 2 in HUVEC Human Cells by Flow Cytometry. HUVEC human umbilical vein endothelial cells were stained with Mouse Anti-Human/Mouse Jagged 1/Jagged 2 PE-conjugated Monoclonal Antibody (Catalog # FAB1726P, filled histogram) or isotype control antibody (Catalog # IC0041P, open histogram). View our protocol for Staining Membrane-associated Proteins.

Flow Cytometry



Detection of Jagged 1/Jagged 2 in D3 Mouse Cell Line by Flow Cytometry. D3 mouse embryonic stem cell line was stained with Mouse Anti-Human/Mouse Jagged 1/Jagged 2 PE-conjugated Monoclonal Antibody (Catalog # FAB1726P, filled histogram) or isotype control antibody (Catalog # IC0041P, open histogram). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Human Jagged 2 is a 131 kDa (predicted) member of the Delta-Serrate-Lag-2 (DSL) family of ligands. This family activates LIN12/Notch proteins and thereby regulates cell fate determination during development (1-5). It is a type 1 transmembrane protein that is synthesized as a 1238 amino acid (aa) precursor. It contains a 23 aa signal sequence, a large 1057 aa extracellular region, a 21 aa transmembrane region, and a short 137 aa cytoplasmic region. The extracellular region contains four potential N-linked glycosylation sites, a DSL domain, 16 EGF-like repeats (many of which are also sites of calcium binding), a von Willebrand factor (vWF) type C domain, and a cysteine-rich region just proximal to the transmembrane segment (2). There are two isoforms for human Jagged 2, named long and short. The short form lacks a splicing variant region (aa 421-461) that is present in the long form of the protein. Human Jagged 2 shares 90% and 87% aa sequence identity with mouse and rat Jagged 2, respectively. During murine embryonic development, Jagged 2 is expressed highest in fetal thymus, epidermis, foregut, dorsal root ganglia, and inner ear (2). In 2 week old mice, the Jagged 2 transcript is most abundant in heart, lung, thymus, skeletal muscle, brain, and testis (2). Functionally, it is suggested that Jagged 2 engages the Notch1 pathway of signal transduction (2). It is involved in the development of the mammalian limb, branchial arches, central and peripheral nervous systems, T cell lineage differentiation, natural killer cells, and the establishment of functional natural killer cell lines (3, 5, 6).

References:

1. Shawber, C. *et al.* (1996) Dev. Biol. **180**:370.
2. Luo, B. *et al.* (1997) Mol. Cell. Biol. **17**:6057.
3. Valsecchi, V. *et al.* (1997) Mech. Dev. **69**:203.
4. Schickwann, T. *et al.* (2000) Blood **96**:950.
5. DeHart, S. *et al.* (2005) Blood **105**:3521.
6. de La Coste, A. and A.A. Freitas (2006) Immunol. Lett. **102**:1.