

DESCRIPTION

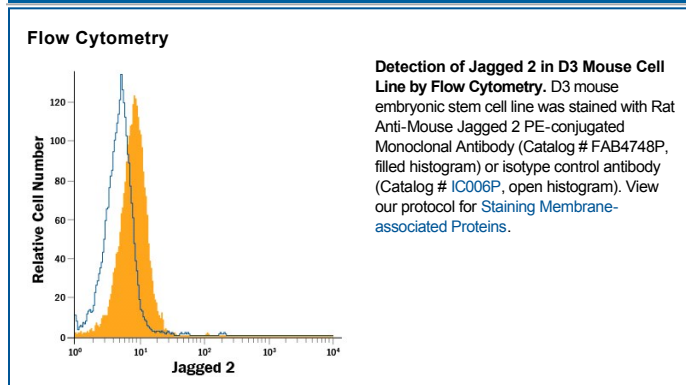
Species Reactivity	Mouse
Specificity	Detects mouse Jagged 2 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) Jagged 1, rhJagged 2, recombinant rat Jagged 1 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 746513
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Jagged 2 Met27-Leu1084 Accession # Q9QYE5
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 μ L/10 ⁶ cells	See Below

DATA



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. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Mouse Jagged 2 is a 150 kDa (1) member of the Delta-Serrate-Lag-2 (DSL) family of ligands that activate LIN12/Notch proteins. This family is known to regulate cell fate determination during development (2-6). Jagged 2 is a type 1 transmembrane protein that is synthesized as a 1247 amino acid (aa) precursor. It contains a 23 aa signal sequence, a 1059 aa extracellular region, a 21 aa transmembrane region, and a 144 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), and a cysteine-rich region just proximal to the transmembrane segment (3). Over aa 27-1084, mouse Jagged 2 shares 97% and 91% aa sequence identity with rat and human Jagged 2, respectively. Jagged 2 is expressed highest in fetal thymus, epidermis, foregut, dorsal root ganglia, and inner ear (3). In 2-week old mice, the Jagged 2 transcript is most abundant in heart, lung, thymus, skeletal muscle, brain, and testis (3). Functionally, it is suggested that Jagged 2 engages the Notch1 pathway of signal transduction (3). Jagged 2 is one of five ligand for Notch in mammals. Its binding affinity is predicted on the degree of Notch glycosylation (7). It is involved in the development of the mammalian limb, branchial arches, central and peripheral nervous systems, $\gamma\delta$ T cell lineage differentiation, and the establishment of functional natural killer cell lines (4-6).

References:

1. Tsai, S. *et al.* (2000) *Blood*, **96**:950.
2. Shawber, C. *et al.* (1996) *Dev. Biol.* **180**:370.
3. Luo, B. *et al.* (1997) *Mol. Cell. Biol.* **17**:6057.
4. Valsecchi, V. *et al.* (1997) *Mech. Dev.* **69**:203.
5. DeHart, S. *et al.* (2005) *Blood* **105**:3521.
6. de La Coste, A. and A.A. Freitas (2006) *Immunol. Lett.* **102**:1.
7. Takeuchi, H. and R.S. Haltiwanger (2014) *Biochem. Biophys. Res. Commun.* **453**:235.