

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	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL 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	0.25-1 µg/10 ⁶ cells	D3 mouse embryonic stem cell line

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

Mouse Jagged 2 is a 150 kDa (1) member of the Delta-Serrate-Lag-2 (DSL) family of ligands that activate LIN12/Notch proteins, and thereby regulate cell fate determinations during development (2-6). It 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). Mouse Jagged 2 shares 93% and 90% 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). It is involved in the development of the mammalian limb, branchial arches, central and peripheral nervous systems, γδ 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.

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