

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse, and rat Jagged 1. In direct ELISAs, no cross-reactivity with recombinant human Jagged 2 is observed. Stains human Jagged 1 transfectants but not the parental cell line or human Jagged 2 transfectants in flow cytometry.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 188331
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	NS0-derived recombinant human Jagged 1 Ser32-Asp296 Accession # P78504
<b>Conjugate</b>	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	K562 human chronic myelogenous leukemia cell line, bEnd.3 mouse endothelioma cell line, and rat cortical stem cells

## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

Jagged 1 is a 180 kDa type I transmembrane glycoprotein and member of the Delta-Serrate-Lag-2 (DSL) family of ligands that activate LIN12/Notch proteins. Human Jagged 1 is synthesized as a 1218 amino acid (aa) precursor that contains a 33 aa signal sequence, a 1034 aa extracellular domain (ECD), a 26 aa transmembrane segment, and a 125 aa cytoplasmic region. The ECD contains a DSL domain (aa 185-229), a cysteine-rich region, 15 EGF-like repeats, of which many bind calcium, and nine potential sites for N-linked glycosylation. Mature human Jagged 1 shares 97% and 96% aa identity with mature mouse and rat Jagged 1, respectively. Jagged 1 is widely expressed in adult and fetal tissues. Jagged-Notch signaling specifies cell fate, regulates pattern formation, defines boundaries between different cell types, and modulates cell proliferation and differentiation, especially during hematopoiesis, myogenesis, neurogenesis, and development of vasculature (1-8). Mutations in human Jagged 1 are the cause of Alagille syndrome, an autosomal-dominant disorder characterized by intrahepatic cholestasis and abnormalities of heart, eye, vertebrae, as well as characteristic facial appearance (9, 10).

### References:

- Sainson, R.C. and A.L. Harris (2008) *Angiogenesis* **11**:41.
- Cordle, J. *et al.* (2008) *Nat. Struct. Mol. Biol.* **15**:849.
- Artavamis-Tsokanas, S. *et al.* (1999) *Science* **284**:770.
- Lai, E.C. (2004) *Development* **131**:965.
- Milner, L.A. *et al.* (1994) *Blood* **83**:2057.
- Nyfelner, Y. *et al.* (2005) *EMBO J.* **24**:3504
- Linheng, L. *et al.* (1998) *Immunity* **8**:43.
- Iso, T. *et al.* (2003) *Arterioscler. Thromb. Vasc. Biol.* **23**:543.
- Oda, T. *et al.* (1997) *Nat. Genet.* **16**:235.
- Oda, T. *et al.* (1997) *Genomics* **43**:376.

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