

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Jagged 1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant rat Jagged 1 is observed and less than 1% cross-reactivity with recombinant human Jagged 2 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Jagged 1 Ser32-Asp296 Accession # P78504
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

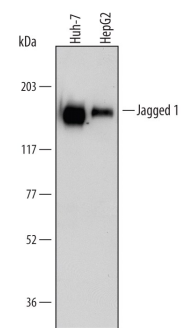
## APPLICATIONS

**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>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Neutralization</b>	Measured by its ability to neutralize Jagged 1-induced alkaline phosphatase production in the C3H10T1/2 mouse embryonic fibroblast cell line. The Neutralization Dose (ND <sub>50</sub> ) is typically 1-5 µg/mL in the presence of 5 µg/mL Recombinant Human Jagged 1 Fc Chimera.	

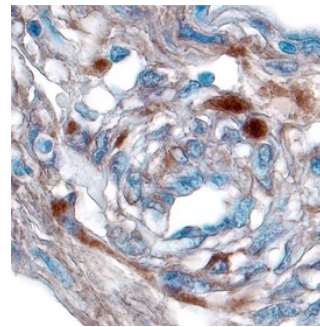
## DATA

### Western Blot



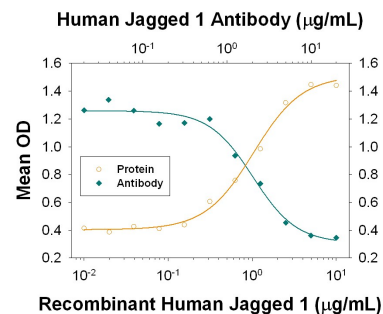
**Detection of Human Jagged 1 by Western Blot.** Western blot shows lysates of Huh-7 human hepatoma cell line and HepG2 human hepatocellular carcinoma cell line. PVDF Membrane was probed with 1 µg/mL of Goat Anti-Human Jagged 1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1277) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Jagged 1 at approximately 180 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Immunohistochemistry



**Jagged 1 in Human Kidney Cancer Tissue.** Jagged 1 was detected in immersion fixed paraffin-embedded sections of human kidney cancer tissue using Goat Anti-Human Jagged 1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1277) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of immersion fixed paraffin-embedded Tissue Sections](#).

### Neutralization



**Alkaline Phosphatase Production Induced by Jagged 1 and Neutralization by Human Jagged 1 Antibody.** Recombinant Human Jagged 1 Fc Chimera (Catalog # 1277-JG) induces alkaline phosphatase production in the C3H10T1/2 mouse embryonic fibroblast cell line in the presence of Recombinant Human/Mouse/Rat BMP-2 (Catalog # 355-BM) in a dose-dependent manner (orange line). Alkaline phosphatase production elicited by Recombinant Human Jagged 1 Fc Chimera (5 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human Jagged 1 Antibody (Catalog # AF1277). The ND<sub>50</sub> is typically 1-5 µg/mL.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</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 is 97% and 96% aa identical to 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:**

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