**DESCRIPTION**

<table>
<thead>
<tr>
<th>Species Reactivity</th>
<th>Human</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specificity</td>
<td>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.</td>
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<tr>
<td>Source</td>
<td>Polyclonal Goat IgG</td>
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<tr>
<td>Purification</td>
<td>Antigen Affinity-purified</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Mouse myeloma cell line NS0-derived recombinant human Jagged 1 Ser32-Asp296 Accession # P78504</td>
</tr>
<tr>
<td>Endotoxin Level</td>
<td>&lt;0.10 EU per 1 µg of the antibody by the LAL method.</td>
</tr>
<tr>
<td>Formulation</td>
<td>Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>1 µg/mL See Below</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>5-15 µg/mL See Below</td>
</tr>
<tr>
<td>Neutralization</td>
<td>Measured by its ability to neutralize Jagged 1-induced alkaline phosphatase production in the C3H10T1/2 mouse embryonic fibroblast cell line. The Neutralization Dose (ND₅₀) is typically 1-5 µg/mL in the presence of 5 µg/mL Recombinant Human Jagged 1 Fc Chimera.</td>
</tr>
</tbody>
</table>

**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 ND₅₀ is typically 1-5 µg/mL.

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*Small pack size (SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.*
**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 0.2 mg/mL in sterile PBS.

**Shipping**
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

**Stability & Storage**
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**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: