R&D SYSTEMS
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Human Jagged 2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1726

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Jagged 2 in direct ELISAs and Western blots. In Western blots, approximately 35% cross-reactivity with recombinant human Jagged 1 is observed and less than 1% cross-reactivity with recombinant rat Jagged 1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Jagged 2 Met27-Asp307 Accession # Q9Y219
Formulation	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.

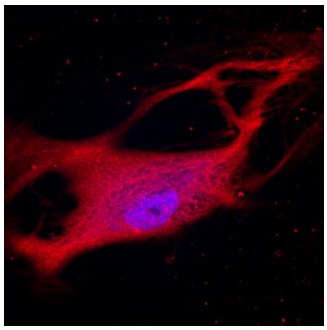
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Human Jagged 2 Fc Chimera (Catalog # 1726-JG)
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human skeletal muscle

DATA

Immunocytochemistry



Jagged 2 in HUVEC Human Cells. Jagged 2 was detected in immersion fixed HUVEC human umbilical vein endothelial cells using Goat Anti-Human Jagged 2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1726) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

BACKGROUND

Human Jagged 2 is a 131 kDa (predicted) member of the Delta-Serrate-Lag-2 (DSL) family of ligands. This family activates LIN12/Notch proteins and thereby regulates cell fate determination during development (1-5). It is a type 1 transmembrane protein that is synthesized as a 1238 amino acid (aa) precursor. It contains a 23 aa signal sequence, a large 1057 aa extracellular region, a 21 aa transmembrane region, and a short 137 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), a von Willebrand factor (vWF) type C domain, and a cysteine-rich region just proximal to the transmembrane segment (2). There are two isoforms for human Jagged 2, named long and short. The short form lacks a splicing variant region (aa 421-461) that is present in the long form of the protein. Human Jagged 2 shares 90% and 87% aa sequence identity with mouse and rat Jagged 2, respectively. During murine embryonic development, Jagged 2 is expressed highest in fetal thymus, epidermis, foregut, dorsal root ganglia, and inner ear (2). In 2 week old mice, the Jagged 2 transcript is most abundant in heart, lung, thymus, skeletal muscle, brain, and testis (2). Functionally, it is suggested that Jagged 2 engages the Notch1 pathway of signal transduction (2). It is involved in the development of the mammalian limb, branchial arches, central and peripheral nervous systems, T cell lineage differentiation, natural killer cells, and the establishment of functional natural killer cell lines (3, 5, 6).

References:

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5. DeHart, S. *et al*. (2005) Blood **105**:3521.
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bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956