SANTA CRUZ BIOTECHNOLOGY, INC.

Jagged1 (E-12): sc-390177

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The LIN-12/Notch family of transmembrane receptors is believed to play a central role in development by regulating cell fate decisions. Ligands for Notch include Jagged1, Jagged2 and Delta. Jagged is a membrane protein and can activate Notch and prevent myoblast differentiation by inhibiting the expression of muscle regulatory and structural genes. It is involved in mammalian cardiovascular development and in cell-fate decisions during hematopoiesis. Jagged is expressed in adult and fetal tissues, and expression is upregulated in cervical squamous cell carcinoma. Familial Tetralogy of Fallot, the most common form of complex congenital heart disease, is caused by a mutation in the Jagged1 gene.

CHROMOSOMAL LOCATION

Genetic locus: JAG1 (human) mapping to 20p12.2; Jag1 (mouse) mapping to 2 F3.

SOURCE

Jagged1 (E-12) is a mouse monoclonal antibody raised against amino acids 1110-1218 of Jagged1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Jagged1 (E-12) is available conjugated to agarose (sc-390177 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to either phycoerythrin (sc-390177 PE), fluorescein (sc-390177 FITC), Alexa Fluor® 488 (sc-390177 AF488), Alexa Fluor® 546 (sc-390177 AF546), Alexa Fluor® 594 (sc-390177 AF594) or Alexa Fluor® 647 (sc-390177 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390177 AF680) or Alexa Fluor® 790 (sc-390177 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Jagged1 (E-12) is recommended for detection of Jagged1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Jagged1 (E-12) is also recommended for detection of Jagged1 in additional species, including equine.

Suitable for use as control antibody for Jagged1 siRNA (h): sc-37202, Jagged1 siRNA (m): sc-37203, Jagged1 siRNA (r): sc-61881, Jagged1 shRNA Plasmid (h): sc-37202-SH, Jagged1 shRNA Plasmid (m): sc-37203-SH, Jagged1 shRNA Plasmid (r): sc-61881-SH, Jagged1 shRNA (h) Lentiviral Particles: sc-37202-V, Jagged1 shRNA (m) Lentiviral Particles: sc-37203-V and Jagged1 shRNA (r) Lentiviral Particles: sc-61881-V.

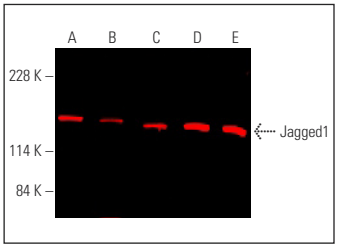
Molecular Weight of Jagged1: 150 kDa.

Positive Controls: A-10 cell lysate: sc-3806, U-251-MG whole cell lysate: sc-364176 or K-562 whole cell lysate: sc-2203.

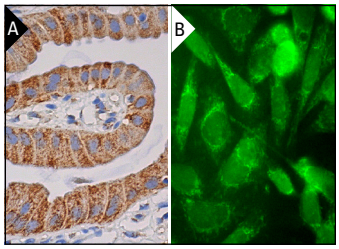
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Jagged1 (E-12): sc-390177. Near-infrared western blot analysis of Jagged1 expression in MIA PaCa-2 (**A**), U-251-MG (**B**), A-10 (**C**), Raji (**D**) and K-562 (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



Jagged1 (E-12): sc-390177. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (**A**). Jagged1 (E-12) FITC: sc-390177 FITC. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Xiao, Y., et al. 2016. Inhibition of cell proliferation and tumor growth of colorectal cancer by inhibitors of Wnt and Notch signaling pathways. Oncol. Lett. 12: 3695-3700.
2. Ivanovska, J., et al. 2017. mTOR-Notch3 signaling mediates pulmonary hypertension in hypoxia-exposed neonatal rats independent of changes in autophagy. Pediatr. Pulmonol. 52: 1443-1454.
3. De Falco, F., et al. 2018. IL-4-dependent Jagged1 expression/processing is associated with survival of chronic lymphocytic leukemia cells but not with Notch activation. Cell Death Dis. 9: 1160.
4. Mao, X., et al. 2019. Single-cell RNA sequencing of hESC-derived 3D retinal organoids reveals novel genes regulating RPC commitment in early human retinogenesis. Stem Cell Reports 13: 747-760.
5. Hsu, Y.C., et al. 2020. De-glycyrrhizinated licorice extract attenuates high glucose-stimulated renal tubular epithelial-mesenchymal transition via suppressing the Notch2 signaling pathway. Cells 9: 125.
6. Tian, J., et al. 2021. MicroRNA-936 targets JAG1 and inhibits the proliferation of hepatocellular carcinoma cells. Technol. Cancer Res. Treat. 20: 1533033820985785.
7. Majumdar, U., et al. 2021. Nitric oxide prevents aortic valve calcification by S-nitrosylation of USP9X to activate Notch signaling. Sci. Adv. 7: eabe3706.
8. Han, H., et al. 2022. The miR-98-3p/JAG1/Notch1 axis mediates the multigenerational inheritance of osteopenia caused by maternal dexamethasone exposure in female rat offspring. Exp. Mol. Med. 54: 298-308.
9. Yuan, B., et al. 2023. Cytotoxic effects of darinaparsin, a novel organic arsenical, against human leukemia cells. Int. J. Mol. Sci. 24: 14726.

RESEARCH USE

For research use only, not for use in diagnostic procedures.