

HES1 (H-20): sc-13844

BACKGROUND

The *Drosophila* Hairy and enhancer of split genes encode basic helix-loop-helix (bHLH) transcriptional repressors that function in the Notch signaling pathway and control segmentation and neural development during embryogenesis. The mammalian homolog of *Drosophila* Hairy and enhancer of split are the HES gene family members HES1-6, which also encode bHLH transcriptional repressors that regulate myogenesis and neurogenesis. The HES family members form a complex with TLE, the mammalian homolog of groucho, and this interaction is mediated by the carboxy-terminal WRPW motif of the HES proteins. The HES/TLE complex functions by directly binding to DNA instead of interfering with activator proteins. Most HES family members, including HES1 and HES5, preferentially bind to the N box (CACNAG) as opposed to the E box (CANNTG). HES1 and HES2 are expressed in a variety of adult and embryonic tissues.

CHROMOSOMAL LOCATION

Genetic locus: HES1 (human) mapping to 3q29; Hes1 (mouse) mapping to 16 B2.

SOURCE

HES1 (H-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HES1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-13844 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13844 X, 200 µg/0.1 ml.

APPLICATIONS

HES1 (H-20) is recommended for detection of HES1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). HES1 (H-20) is also recommended for detection of HES1 in additional species, including bovine and porcine.

Suitable for use as control antibody for HES1 siRNA (h): sc-37938, HES1 siRNA (m): sc-37939, HES1 shRNA Plasmid (h): sc-37938-SH, HES1 shRNA Plasmid (m): sc-37939-SH, HES1 shRNA (h) Lentiviral Particles: sc-37938-V and HES1 shRNA (m) Lentiviral Particles: sc-37939-V.

HES1 (H-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HES1: 35 kDa.

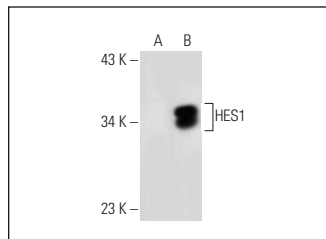
RESEARCH USE

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

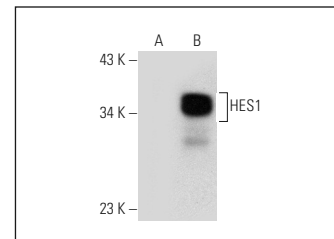
STORAGE

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

DATA



HES1 (H-20): sc-13844. Western blot analysis of HES1 expression in non-transfected: sc-117752 (A) and human HES1 transfected: sc-113854 (B) 293T whole cell lysates.



HES1 (H-20): sc-13844. Western blot analysis of HES1 expression in non-transfected: sc-117752 (A) and mouse HES1 transfected: sc-120760 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Eagar, T.N., et al. 2004. Notch 1 signaling regulates peripheral T cell activation. *Immunity* 20: 407-415.
2. Kalinichenko, V.V., et al. 2004. FOXF1 haploinsufficiency reduces Notch 2 signaling during mouse lung development. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 286: L521-L530.
3. Veeraraghavalu, K. 2004. Papillomavirus-mediated neoplastic progression is associated with reciprocal changes in JAGGED1 and manic fringe expression linked to notch activation. *J. Virol.* 78: 8687-8700.
4. Riz, I., et al. 2009. Transcriptional activation by TLX1/HOX11 involves Gro/TLE corepressors. *Biochem. Biophys. Res. Commun.* 380: 361-365.
5. Espinosa, L., et al. 2010. The Notch/Hes1 pathway sustains NFκB activation through CYLD repression in T cell leukemia. *Cancer Cell* 18: 268-281.
6. Liao, S., et al. 2011. Inhibitory effect of curcumin on oral carcinoma CAL-27 cells via suppression of Notch-1 and NFκB signaling pathways. *J. Cell. Biochem.* 112: 1055-1065.
7. Zhao, X., et al. 2012. Derivation of myoepithelial progenitor cells from bipotent mammary stem/progenitor cells. *PLoS ONE* 7: e35338.
8. Guiu, J., et al. 2013. Hes repressors are essential regulators of hematopoietic stem cell development downstream of Notch signaling. *J. Exp. Med.* 210: 71-84.
9. You, P., et al. 2013. Jagged-1-HES-1 signaling inhibits the differentiation of TH17 cells via RORγ. *J. Biol. Regul. Homeost. Agents* 27: 79-93.

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