

HES1 (H-140): sc-25392

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-140) is a rabbit polyclonal antibody raised against amino acids 163-194 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.

Available as agarose conjugate for immunoprecipitation, sc-25392 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-25392 X, 200 µg/0.1 ml.

APPLICATIONS

HES1 (H-140) 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).

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-140) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

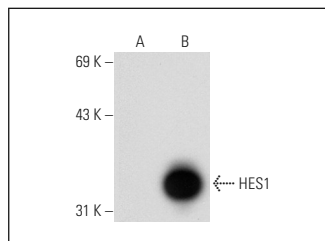
Molecular Weight of HES1: 35 kDa.

Positive Controls: HES1 (h): 293T Lysate: sc-113854, THP-1 cell lysate: sc-2238, or CCRF-CEM cell lysate: sc-2225.

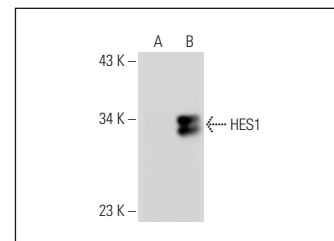
STORAGE

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

DATA



HES1 (H-140): sc-25392. Western blot analysis of HES1 expression in non-transfected: sc-117752 (A) and mouse HES1 transfected: sc-120759 (B) 293T whole cell lysates.



HES1 (H-140): sc-25392. Western blot analysis of HES1 expression in non-transfected: sc-117752 (A) and human HES1 transfected: sc-113854 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Bheeshmachar, G., et al. 2006. Evidence for a role for Notch signaling in the cytokine-dependent survival of activated T cells. *J. Immunol.* 177: 5041-5050.
2. Ou-Yang, H.F., et al. 2009. Notch signaling regulates the FOXP3 promoter through RBP-J- and Hes1-dependent mechanisms. *Mol. Cell. Biochem.* 320: 109-114.
3. Nakahara, F., et al. 2010. Hes1 immortalizes committed progenitors and plays a role in blast crisis transition in chronic myelogenous leukemia. *Blood* 115: 2872-2881.
4. Ichi, S., et al. 2011. Role of Pax3 acetylation in the regulation of Hes1 and Neurog2. *Mol. Biol. Cell* 22: 503-512.
5. Alvarez, Y., et al. 2011. Notch- and transducin-like enhancer of split (TLE)-dependent histone deacetylation explain interleukin 12 (IL-12) p70 inhibition by zymosan. *J. Biol. Chem.* 286: 16583-16595.
6. Xu, L., et al. 2012. Notch1 activation promotes renal cell carcinoma growth via PI3K/Akt signaling. *Cancer Sci.* 103: 1253-1258.
7. Maraver, A., et al. 2012. Therapeutic effect of γ -secretase inhibition in kras(G12V)-driven non-small cell lung carcinoma by derepression of DUSP1 and inhibition of ERK. *Cancer Cell* 22: 222-234.

RESEARCH USE

For research use only, not for use in diagnostic procedures



Try **HES1 (E-5): sc-166410** or **HES1 (A-12): sc-166378**, our highly recommended monoclonal alternatives to HES1 (H-140). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **HES1 (E-5): sc-166410**.