

HES1 (N-17): sc-13842



The Power to Question

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, HES4 (human) mapping to 1p36.33; Hes1 (mouse) mapping to 16 B2.

SOURCE

HES1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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-13842 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-13842 X, 200 µg/0.1 ml.

APPLICATIONS

HES1 (N-17) is recommended for detection of HES1 of mouse, rat and human origin and HES4 of 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 (N-17) is also recommended for detection of HES1 and HES4 in additional species, including equine, bovine and porcine.

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

HES1 (N-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

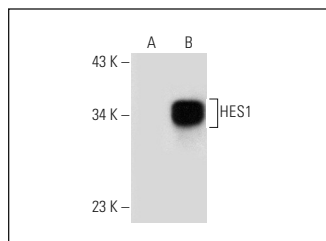
Molecular Weight of HES1: 35 kDa.

Positive Controls: HES1 (m2): 293T Lysate: sc-120760, HES1 (h2): 293T Lysate: sc-171319 or THP-1 cell lysate: sc-2238.

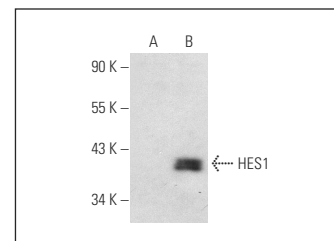
STORAGE

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

DATA



HES1 (N-17): sc-13842. Western blot analysis of HES1 expression in non-transfected: sc-117752 (A) and mouse HES1 transfected: sc-120760 (B) 293T whole cell lysates.



HES1 (N-17): sc-13842. Western blot analysis of HES1 expression in non-transfected: sc-117752 (A) and human HES1 transfected: sc-171319 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Xin, H., et al. 2006. Bone marrow stromal cells induce BMP2/4 production in oxygen-glucose-deprived astrocytes, which promotes an astrocytic phenotype in adult subventricular progenitor cells. *J. Neurosci. Res.* 83: 1485-1493.
- Bhat, K.M., et al. 2006. Transcriptional regulation of human MAP2 gene in melanoma: role of neuronal bHLH factors and Notch 1 signaling. *Nucleic Acids Res.* 34: 3819-3832.
- Conboy, L., et al. 2007. Notch signalling becomes transiently attenuated during long-term memory consolidation in adult Wistar rats. *Neurobiol. Learn. Mem.* 88: 342-351.
- Yang, J., et al. 2009. hnRNP I inhibits Notch signaling and regulates intestinal epithelial homeostasis in the zebrafish. *PLoS Genet.* 5: e1000363.
- Yen, H.Y., et al. 2010. Jagged1 functions downstream of Twist1 in the specification of the coronal suture and the formation of a boundary between osteogenic and non-osteogenic cells. *Dev. Biol.* 347: 258-270.
- Kishimoto, N., et al. 2013. Interhemispheric asymmetry of olfactory input-dependent neuronal specification in the adult brain. *Nat. Neurosci.* 16: 884-888.
- Liu, C., et al. 2015. miR-29a activates Hes1 by targeting Nfia in esophageal carcinoma cell line TE-1. *Oncol. Lett.* 9: 96-102.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.