

HES1 (F-10): sc-165996

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 (F-10) is a mouse monoclonal antibody raised against amino acids 163-194 of HES1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-165996 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

HES1 (F-10) is recommended for detection of HES1 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) 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 siRNA (r): sc-270146, HES1 shRNA Plasmid (h): sc-37938-SH, HES1 shRNA Plasmid (m): sc-37939-SH, HES1 shRNA Plasmid (r): sc-270146-SH, HES1 shRNA (h) Lentiviral Particles: sc-37938-V, HES1 shRNA (m) Lentiviral Particles: sc-37939-V and HES1 shRNA (r) Lentiviral Particles: sc-270146-V.

HES1 (F-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

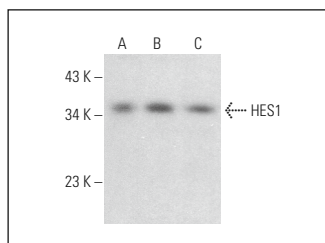
Molecular Weight of HES1: 35 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HES1 (h): 293T Lysate: sc-113854 or A-431 whole cell lysate: sc-2201.

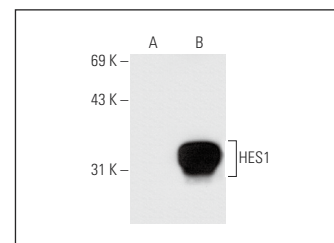
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HES1 (F-10): sc-165996. Western blot analysis of HES1 expression in CCRF-CEM (A), A-431 (B) and F9 (C) whole cell lysates.



HES1 (F-10): sc-165996. 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

- Kakar, S.S., et al. 2014. Withaferin A alone and in combination with cisplatin suppresses growth and metastasis of ovarian cancer by targeting putative cancer stem cells. *PLoS ONE* 9: e107596.
- Nguyen, T.L., et al. 2021. Downregulation of glutamine synthetase, not glutaminolysis, is responsible for glutamine addiction in Notch1-driven acute lymphoblastic leukemia. *Mol. Oncol.* 15: 1412-1431.
- Prabhu, S., et al. 2023. Knockdown of sirtuin6 positively regulates acetylation of DNMT1 to inhibit the NOTCH signaling pathway in non-small cell lung cancer cell lines. *Cell. Signal.* 105: 110629.

RESEARCH USE

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

PROTOCOLS

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