



HES1 (AA-17): sc-101061

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 homologues 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 homologue 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 (CAC-NAG) as opposed to the E box (CANNTG). HES2 binds to both N and E box sites, while HES6 does not bind DNA. Rather, HES6 inhibits HES1 activity, thereby promoting transcription. HES1 and HES2 are expressed in a variety of adult and embryonic tissues. HES3 is expressed exclusively in cerebellar Purkinje cells, and HES5 is found solely in the nervous system. HES6 is produced in brain as well as in the limb buds of developing embryos.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: HES1 (human) mapping to 3q28-q29.

SOURCE

HES1 (AA-17) is a mouse monoclonal antibody raised against recombinant HES1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HES1 (AA-17) is recommended for detection of HES1 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)] 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 shRNA Plasmid (h): sc-37938-SH and HES1 shRNA (h) Lentiviral Particles: sc-37938-V.

Molecular Weight of HES1: 35 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.