

# HES2 (H-110): sc-28744

## 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 homologs 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). 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.

## CHROMOSOMAL LOCATION

Genetic locus: HES2 (human) mapping to 1p36.31; Hes2 (mouse) mapping to 4 E2.

## SOURCE

HES2 (H-110) is a rabbit polyclonal antibody raised against amino acids 64-173 mapping at the C-terminus of HES2 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-28744 X, 200 µg/0.1 ml.

## APPLICATIONS

HES2 (H-110) is recommended for detection of HES2 isoform 1 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), immunohistochemistry (including paraffin-embedded sections) (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 HES2 siRNA (h): sc-37940, HES2 siRNA (m): sc-37941, HES2 shRNA Plasmid (h): sc-37940-SH, HES2 shRNA Plasmid (m): sc-37941-SH, HES2 shRNA (h) Lentiviral Particles: sc-37940-V and HES2 shRNA (m) Lentiviral Particles: sc-37941-V.

HES2 (H-110) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

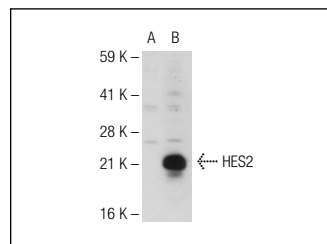
Molecular Weight of HES2: 14 kDa.

Positive Controls: HES2 (h): 293T Lysate: sc-112848, K-562 nuclear extract: sc-2130 or PC-3 nuclear extract: sc-2152.

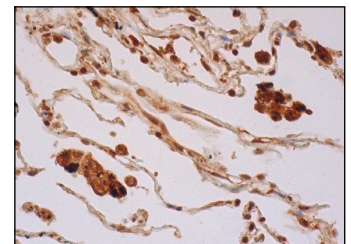
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



HES2 (H-110): sc-28744. Western blot analysis of HES2 expression in non-transfected: sc-117752 (A) and human HES2 transfected: sc-112848 (B) 293T whole cell lysates.



HES2 (H-110): sc-28744. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing nuclear and cytoplasmic staining of pneumocytes and macrophages.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

**MONOS**  
Satisfaction  
Guaranteed

Try **HES2 (H-8): sc-514711** or **HES2 (A-4): sc-166705**, our highly recommended monoclonal alternatives to HES2 (H-110).