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Diagnostik & molekulare Diagnostik



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- Expressversand

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# HES1 (m): 293T Lysate: sc-120759

## BACKGROUND

The *Drosophila* Hairless 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* Hairless 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.

## REFERENCES

1. Sasai, Y., Kageyama, R., Tagawa, Y., Shigemoto, R. and Nakanishi, S. 1992. Two mammalian helix-loop-helix factors structurally related to *Drosophila* Hairless and enhancer of split. *Genes Dev.* 6: 2620-2634.
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3. Ishibashi, M., Sasai, Y., Nakanishi, S. and Kageyama, R. 1993. Molecular characterization of HES2, a mammalian helix-loop-helix factor structurally related to *Drosophila* Hairless and enhancer of split. *Eur. J. Biochem.* 215: 645-652.
4. Takebayashi, K., Sasai, Y., Sakai, Y., Watanabe, T., Nakanishi, S. and Kageyama, R. 1994. Structure, chromosomal locus and promoter analysis of the gene encoding the mouse helix-loop-helix factor HES1. Negative autoregulation through the multiple N box elements. *J. Biol. Chem.* 269: 5150-5156.
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6. Grbavec, D. and Stifani, S. 1996. Molecular interaction between TLE1 and the carboxyl-terminal domain of HES1 containing the WRPW motif. *Biochem. Biophys. Res. Commun.* 223: 701-705.
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8. Bae, S., Bessho, Y., Hojo, M. and Kageyama, R. 2000. The bHLH gene HES6, an inhibitor of HES1, promotes neuronal differentiation. *Development* 127: 2933-2943.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## CHROMOSOMAL LOCATION

Genetic locus: Hes1 (mouse) mapping to 16 B2.

## PRODUCT

HES1 (m): 293T Lysate represents a lysate of mouse HES1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

HES1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive HES1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## 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) for detailed protocols and support products.