

# HRT3 (N-19): sc-16448

## BACKGROUND

The LIN-12/Notch family of transmembrane receptors plays a central role in development by regulating cell fate and establishing boundaries of gene expression. Notch signaling activates the Hairy/Enhancer of split [H/E(spl)] genes, which encode basic helix-loop-helix (bHLH) transcriptional repressors that are critical for directing embryonic patterning and development. The Hairy-related transcription factors (HRTs) comprise a subclass of bHLH proteins that exhibit structural similarity with the H/E(spl) proteins and include HRT1, HRT2 and HRT3. The HRT family (also designated Hesr, Hey, CHF and Gridlock) contain a bHLH domain, an Orange domain and a novel YRPW domain, which is absent in HRT3. The Hairy-related genes map to human chromosomes 8q21, 6q21 and 1p34.3 for HRT1, HRT2 and HRT3, respectively, and are downstream targets for Notch signaling. HRT1 is expressed in the somitic mesoderm, central nervous system, kidney, heart, nasal epithelium and limb buds in murine embryos as well as in adult tissues. It has altered expression in many breast, lung and kidney tumors. Like HRT1, HRT2 and HRT3 are also expressed in developing somites, heart and nervous system.

## REFERENCES

1. Simpson, P. 1994. The Notch receptors. Austin, TX: R.G. Landes Company.
2. Kokubo, H., et al. 1999. Identification and expression of a novel family of bHLH cDNAs related to *Drosophila* Hairy and Enhancer of split. *Biochem. Biophys. Res. Commun.* 260: 459-465.
3. Nakagawa, O., et al. 1999. HRT1, HRT2, and HRT3: a new subclass of bHLH transcription factors marking specific cardiac, somitic, and pharyngeal arch segments. *Dev. Biol.* 216: 72-84.
4. Leimeister, C., et al. 1999. Hey genes: a novel subfamily of Hairy and Enhancer of split related genes specifically expressed during mouse embryogenesis. *Mech. Dev.* 85: 173-177.

## CHROMOSOMAL LOCATION

Genetic locus: HEYL (human) mapping to 1p34.3; Heyl (mouse) mapping to 4 D2.2.

## SOURCE

HRT3 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of HRT3 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-16448 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-16448 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

HRT3 (N-19) is recommended for detection of HRT3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HRT3 (N-19) is also recommended for detection of HRT3 in additional species, including canine and bovine.

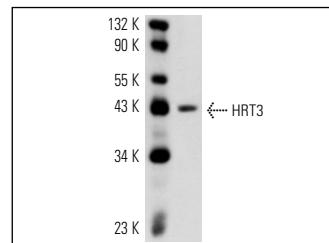
Suitable for use as control antibody for HRT3 siRNA (h): sc-37918, HRT3 siRNA (m): sc-37919, HRT3 shRNA Plasmid (h): sc-37918-SH, HRT3 shRNA Plasmid (m): sc-37919-SH, HRT3 shRNA (h) Lentiviral Particles: sc-37918-V and HRT3 shRNA (m) Lentiviral Particles: sc-37919-V.

HRT3 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HRT3: 41 kDa.

Positive Controls: C3H/10T1/2 cell lysate: sc-3801.

## DATA



HRT3 (N-19): sc-16448. Western blot analysis of HRT3 expression in C3H/10T1/2 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Ferreira, A.C., et al. 2012. E-cadherin impairment increases cell survival through Notch-dependent upregulation of Bcl-2. *Hum. Mol. Genet.* 21: 334-343.

## RESEARCH USE

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

## PROTOCOLS

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