SANTA CRUZ BIOTECHNOLOGY, INC.

N-twist (O-20): sc-102032

BACKGROUND

N-twist (neuronal twist), also known as Fer3-like protein or nephew of atonal 3, is a 166 amino acid member of the basic helix-loop-helix (bHLH) transcription factor family. N-twist functions as an inhibitor of transcription by binding DNA at the E box, a consensus bHLH-binding site. Primarily expressed in the developing central nervous system, N-twist interacts with the bHLH domain of E12 to form a heterodimer. By sequestering E proteins in a dominant-negative fashion, N-twist inhibits ASH1L-dependent transcriptional activation, which suggests the role N-twist may play in the negative regulation of neurogenesis. Methylation of the gene encoding N-twist has shown to be associated with a poor prognosis in CpG island (CGI) methylator phenotype (CIMP) positive neuroblastomas.

REFERENCES

1. Gradwohl, G., Fode, C. and Guillemot, F. 1996. Restricted expression of a novel murine atonal-related bHLH protein in undifferentiated neural precursors. Dev. Biol. 180: 227-241.
2. Spicer, D.B., Rhee, J., Cheung, W.L. and Lassar, A.B. 1996. Inhibition of myogenic bHLH and MEF2 transcription factors by the bHLH protein twist. Science 272: 1476-1480.
3. Hamamori, Y., Wu, H.Y., Sartorelli, V. and Kedes, L. 1997. The basic domain of myogenic basic helix-loop-helix (bHLH) proteins is the novel target for direct inhibition by another bHLH protein, twist. Mol. Cell. Biol. 17: 6563-6573.
4. Lee, M.S., Lowe, G.N., Strong, D.D., Wergedal, J.E. and Glackin, C.A. 1999. Twist, a basic helix-loop-helix transcription factor, can regulate the human osteogenic lineage. J. Cell. Biochem. 75: 566-577.
5. Segev, E., Halachmi, N., Salzberg, A. and Ben-Arie, N. 2001. Nato3 is an evolutionarily conserved bHLH transcription factor expressed in the CNS of *Drosophila* and mouse. Mech. Dev. 106: 197-202.
6. Verzi, M.P., Anderson, J.P., Dodou, E., Kelly, K.K., Greene, S.B., North, B.J., Cripps, R.M. and Black, B.L. 2002. N-twist, an evolutionarily conserved bHLH protein expressed in the developing CNS, functions as a transcriptional inhibitor. Dev. Biol. 249: 174-190.

CHROMOSOMAL LOCATION

Genetic locus: FERD3L (human) mapping to 7p21.1

SOURCE

N-twist (O-20) is an affinity purified rabbit polyclonal antibody raised against N-twist of human origin.

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.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

N-twist (O-20) is recommended for detection of N-twist 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)], 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 N-twist siRNA (h): sc-89469, N-twist shRNA Plasmid (h): sc-89469-SH and N-twist shRNA (h) Lentiviral Particles: sc-89469-V.

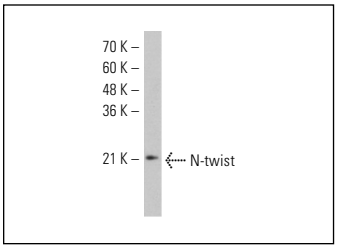
Molecular Weight of N-twist: 26 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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



N-twist (O-20): sc-102032. Western blot analysis of N-twist expression in Hep G2 whole cell lysate.

PROTOCOLS

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