SANTA CRUZ BIOTECHNOLOGY, INC.

twist (C-17): sc-6269

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the myogenic determination family are basic helix-loop-helix (bHLH) proteins that can be separated into two classes. Class A proteins include the ubiquitously expressed E-box binding factors E12/E47, ITF2 and HEB (BETA1 or HTF4). Class B proteins such as MyoD, myogenin and NeuroD (BETA2) are transiently expressed and exhibit a much more limited tissue distribution. Class A proteins heterodimerize with class B proteins to activate DNA transcription. Working in opposition to these positively acting factors are a specialized group of proteins that function as dominant negative regulators. Muscle tissue is derived from a subset of cells originating from the embryonic mesoderm. The novel basic helix-loop-helix (bHLH) transcription factor, twist, is a putative regulator of mesodermal differentiation and myogenesis. Twist is expressed throughout the epithelial somite but not in the myotome. Twist requires dimerization with the E proteins and inhibits myogenic regulatory factors. It has been implicated as regulator of the temporal and spatial formation of myotomes.

CHROMOSOMAL LOCATION

Genetic locus: TWIST1 (human) mapping to 7p21.2, TWIST2 (human) mapping to 2q37.3; Twist1 (mouse) mapping to 12 A3, Twist2 (mouse) mapping to 7 D.

SOURCE

twist (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of twist 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.

Blocking peptide available for competition studies, sc-6269 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-6269 X, 200 µg/0.1 ml.

APPLICATIONS

twist (C-17) is recommended for detection of twist and twist2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

twist (C-17) is also recommended for detection of twist and twist2 in additional species, including equine, canine, bovine, porcine and avian.

twist (C-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

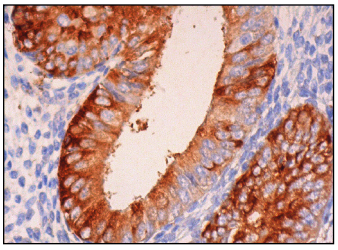
Molecular Weight of twist: 28 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, JAR cell lysate: sc-2276 or MES-SA/Dx5 cell lysate: sc-2284.

STORAGE

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

DATA



twist (C-17): sc-6269. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pre-menopausal uterus tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Maestro, R., et al. 1999. Twist is a potential oncogene that inhibits apoptosis. Genes Dev. 13: 2207-2217.
2. Yousfi, M., et al. 2001. Increased bone formation and decreased osteocalcin expression induced by reduced twist dosage in Saethre-Chotzen syndrome. J. Clin. Invest. 107: 1153-1161.
3. Villavicencio, E.H., et al. 2002. Cooperative E-box regulation of human GLI1 by twist and USF. Genesis 32: 247-258.
4. Martin, T.A., et al. 2005. Expression of the transcription factors Snail, SLUG, and twist and their clinical significance in human breast cancer. Ann. Surg. Oncol. 12: 488-496.
5. Guenou, H., et al. 2005. A role for fibroblast growth factor receptor-2 in the altered osteoblast phenotype induced by twist haploinsufficiency in the Saethre-Chotzen syndrome. Hum. Mol. Genet. 14: 1429-1439.
6. Funato, N., et al. 2005. Functional analysis of natural mutations in two twist protein motifs. Hum. Mutat. 25: 550-556.
7. Laursen, K.B., et al. 2007. Mechanism of transcriptional activation by the proto-oncogene twist1. J. Biol. Chem. 282: 34623-34633.
8. Kawagoe, H., et al. 2007. Overexpression of N-Myc rapidly causes acute myeloid leukemia in mice. Cancer Res. 67: 10677-10685.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **twist (Twist2C1a): sc-81417**, our highly recommended monoclonal alternative to twist (C-17).