

## twist (N-19): sc-6070

### 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 7p21.1; Twist1 (mouse) mapping to 12 A3.

### SOURCE

twist (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-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-6070 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-6070 X, 200 µg/0.1 ml.

### APPLICATIONS

twist (N-19) is recommended for detection of twist 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). twist (N-19) is also recommended for detection of twist in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for twist siRNA (h): sc-38604, twist siRNA (m): sc-38605, twist shRNA Plasmid (h): sc-38604-SH, twist shRNA Plasmid (m): sc-38605-SH, twist shRNA (h) Lentiviral Particles: sc-38604-V and twist shRNA (m) Lentiviral Particles: sc-38605-V.

twist (N-19) 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.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### SELECT PRODUCT CITATIONS

1. Maestro, R., et al. 1999. Twist is a potential oncogene that inhibits apoptosis. *Genes Dev.* 13: 2207-2217.
2. Funato, N., et al. 2001. Common regulation of growth arrest and differentiation of osteoblasts by helix-loop-helix factors. *Mol. Cell. Biol.* 21: 7416-7428.
3. Alexander, N.R., et al. 2006. N-cadherin gene expression in prostate carcinoma is modulated by integrin-dependent nuclear translocation of twist1. *Cancer Res.* 66: 3365-3369.
4. Laursen, K.B., et al. 2007. Mechanism of transcriptional activation by the proto-oncogene twist1. *J. Biol. Chem.* 282: 34623-34633.
5. Loayza-Puch, F., et al. 2010. Hypoxia and Ras-signaling pathways converge on, and cooperatively downregulate, the RECK tumor-suppressor protein through microRNAs. *Oncogene* 29: 2638-2648.
6. Weiss, M.B., et al. 2014. FOXD3 modulates migration through direct transcriptional repression of TWIST1 in melanoma. *Mol. Cancer Res.* 12: 1314-1323.

### 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.



Try **twist (Twist2C1a): sc-81417**, our highly recommended monoclonal alternative to twist (N-19).