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Product Information

Anti-Twist1
produced in rabbit, affinity isolated antibody

Catalog Number **T6451**

Product Description

Anti-Twist1 is produced in rabbit using a synthetic peptide corresponding to amino acids 12-27 of human Twist1 with a C-terminal added cysteine, conjugated to KLH, as immunogen. The corresponding peptide sequence is identical in both rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Twist1 recognizes human Twist1 by immunoblotting (~26 kDa) and immunofluorescence. Detection of the Twist1 band by immunoblotting is specifically inhibited with the immunizing peptide. Minor additional bands may be detected in some extract preparations.

The basic helix-loop-helix (bHLH) transcription factor Twist, first discovered in *Drosophila*, was found to be essential in mesoderm formation.[1] Two Twist-like proteins were found in mammals, Twist and Dermo1, also known as Twist1 and Twist2, respectively.[2, 3] Twist1 was found to be required in head mesenchyme for cranial neural tube morphogenesis in mice.[4] Twist1 is involved in osteoblast differentiation and maturation.[5] It represses expression of proinflammatory cytokines such as TNFα and IL-1β and interacts with the histone acetyltransferase domains of p300 and PCAF inhibiting their acetyltransferase activities.[3, 6] Mutations in this gene have been found in patients with Saethre-Chotzen syndrome, an autosomal dominant defect characterized by minor skull and limb anomalies.[7]

Twist1 is a regulator of embryonic morphogenesis and plays an essential role in metastasis by promoting an epithelial-mesenchymal transition (EMT). During an EMT, Twist induces the expression of mesenchymal markers, such as fibronectin and N-cadherin, and represses E-cadherin expression inhibiting cell-cell adhesion and therefore inducing infiltrative tumor growth in various human carcinomas.[8] Twist over-expression in breast cancer cells can induce angiogenesis and correlates with chromosomal instability.[9]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.5-1 µg/mL is recommended using extracts of human 293T cells expressing recombinant human Twist1 and a chemiluminescent detection reagent.

Note: The molecular weight band (~26 kDa) was observed with a myc-tagged protein.

Indirect immunofluorescence: a working antibody concentration of 1-2 µg/mL is recommended using osteosarcoma MG-63 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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