10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TWIST1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1809a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	Q15672
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	10E4E6
Isotype	IgG1
Calculated MW	20954
Description	Basic helix-loop-helix (bHLH) transcription factors have been implicated in cell lineage determination and differentiation. The protein encoded by this gene is a bHLH transcription factor and shares similarity with another bHLH transcription factor, Dermo1. The strongest expression of this mRNA is in placental tissue; in adults, mesodermally derived tissues express this mRNA preferentially. Mutations in this gene have been found in patients with Saethre-Chotzen syndrome.
Immunogen	Purified recombinant fragment of human TWIST1 (AA: 9-74) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	7291
Other Names	Twist-related protein 1, Class A basic helix-loop-helix protein 38, bHLHa38, H-twist, TWIST1, BHLHA38, TWIST
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TWIST1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TWIST1

Synonyms	BHLHA38, TWIST
Function	Acts as a transcriptional regulator. Inhibits myogenesis by sequestrating E proteins, inhibiting trans-activation by MEF2, and inhibiting DNA-binding by MYOD1 through physical interaction. This interaction probably involves the basic domains of both proteins. Also represses expression of pro-inflammatory cytokines such as TNFA and IL1B. Regulates cranial suture patterning and fusion. Activates transcription as a heterodimer with E proteins. Regulates gene expression differentially, depending on dimer composition. Homodimers induce expression of FGFR2 and POSTN while heterodimers repress FGFR2 and POSTN expression and induce THBS1 expression. Heterodimerization is also required for osteoblast differentiation. Represses the activity of the circadian transcriptional activator: NPAS2-BMAL1 heterodimer (By similarity).
Cellular Location	Nucleus.
Tissue Location	Subset of mesodermal cells.

Background

Basic helix-loop-helix (bHLH) transcription factors have been implicated in cell lineage determination and differentiation. The protein encoded by this gene is a bHLH transcription factor and shares similarity with another bHLH transcription factor, Dermo1. The strongest expression of this mRNA is in placental tissue; in adults, mesodermally derived tissues express this mRNA preferentially. Mutations in this gene have been found in patients with Saethre-Chotzen syndrome. ; ; ;

References

1. Cancer Res. 2013 Jan 15;73(2):662-71. 2. Cancer Res. 2012 Dec 15;72(24):6382-92.

Images

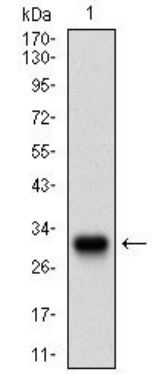

Figure 1: Western blot analysis using TWIST1 mAb against human TWIST1 recombinant protein. (Expected MW is 31.9 kDa)

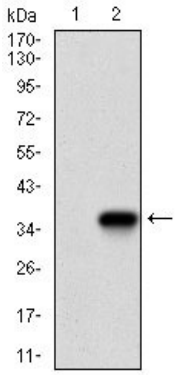

Figure 2: Western blot analysis using TWIST1 mAb against HEK293 (1) and TWIST1 (AA: 9-74)-hIgGFc transfected HEK293 (2) cell lysate.

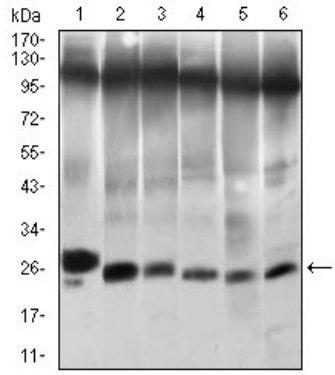

Figure 3: Western blot analysis using TWIST1 mouse mAb against NIH/3T3 (1), JURKAT (2), HELA (3), A549 (4), RAJI (5) and OCM-1 (6) cell lysate.

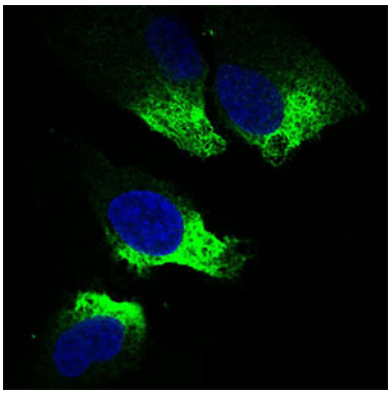

Figure 4: Immunofluorescence analysis of Hela cells using TWIST1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

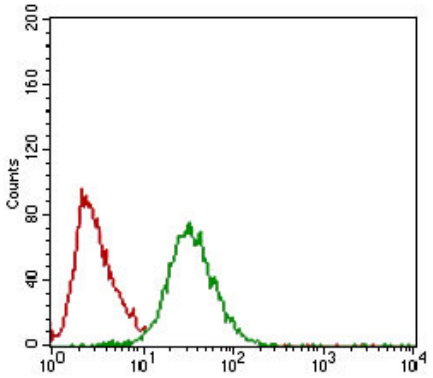

Figure 5: Flow cytometric analysis of Hela cells using TWIST1 mouse mAb (green) and negative control (red).

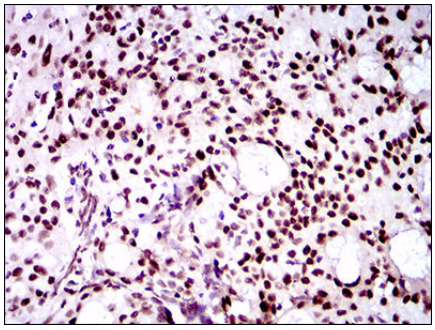

Figure 6: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using TWIST1 mouse mAb with DAB staining.