SunLong Biotech Co.,LTD
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**[ Primary Antibody ]**

# Rabbit Anti-TWIST antibody

**Catalog Number: SL2441R**

**FOR RESEARCH USE ONLY**

**[ DATASHEET ]**

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| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Clonality:** | Polyclonal |
| **Target:** | TWIST |
| **Immunogen:** | KLH conjugated synthetic peptide derived from human TWIST: 71-170/202 |
| **Purification:** | affinity purified by Protein A |
| **Concentration:** | 1mg/ml |
| **Storage:** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. |
| **Applications:** | IHC-P=1:100-500<br>IHC-F=1:100-500<br>IF=1:100-500 （Paraffin sections need antigen repair）<br>not yet tested in other applications.<br>optimal dilutions/concentrations should be determined by the end user. |
| **Reactivity:** | Mouse,Rat(predicted:Human) |
| **Predicted MW.:** | 23kDa |
| **Subcellular Location:** | The nucleus |
| **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. [provided by RefSeq, Jul 2008].<br>**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 proinflammatory cytokines such as TNFA and IL1B. Regulates cranial suture patterning and fusion. Activates transcription as a heterodimer |

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| | 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.<br>**Subunit:** Efficient DNA binding requires dimerization with another bHLH protein. Homodimer or heterodimer with E proteins such as TCF3. ID1 binds preferentially to TCF3 but does not interact efficiently with TWIST1 so ID1 levels control the amount of TCF3 available to dimerize with TWIST1 and thus determine the type of dimer formed.<br>**Subcellular Location:** Nucleus.<br>**Tissue Specificity:** Subset of mesodermal cells<br>DISEASE: Defects in TWIST1 are a cause of Saethre-Chotzen syndrome (SCS) [MIM:101400]; also known as acrocephalosyndactyly type 3 (ACS3). SCS is a craniosynostosis syndrome characterized by coronal synostosis, brachycephaly, low frontal hairline, facial asymmetry, hypertelorism, broad halluces, and clinodactyly.<br>Defects in TWIST1 are the cause of Robinow-Sorauf syndrome (RSS) [MIM:180750]; also known as craniosynostosis-bifid hallux syndrome. RSS is an autosomal dominant defect characterized by minor skull and limb anomalies which is very similar to Saethre-Chotzen syndrome.<br>Defects in TWIST1 are the cause of craniosynostosis type 1 (CRS1) [MIM:123100]. Craniosynostosis consists of premature fusion of one or more cranial sutures, resulting in an abnormal head shape.<br>**Similarity:** Contains 1 basic helix-loop-helix (bHLH) domain.<br>**Database links:**<br>**Entrez Gene:** 7291 Human<br>**Entrez Gene:** 22160 Mouse<br>**Entrez Gene:** 85489 Rat<br>Omim: 601622 Human<br>**SwissProt:** Q15672 Human<br>**SwissProt:** P26687 Mouse<br>**Unigene:** 66744 Human<br>**Unigene:** 3280 Mouse<br>**Unigene:** 161904 Rat<br>Transcription factor<br>Twist protein is a highly conserved transcription factor belonging to the basic helix-loop-helix protein family. Twist plays a role in inhibiting tumour apoptosis and promoting tumour cell metastasis. |

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## [ VALIDATION IMAGES ]

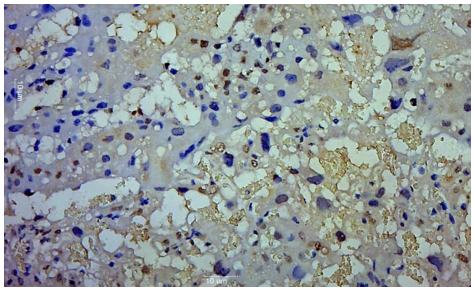


Figure 1. Paraformaldehyde-fixed, paraffin embedded (Mouse placenta); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TWIST) Polyclonal Antibody, Unconjugated (SL2441R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining

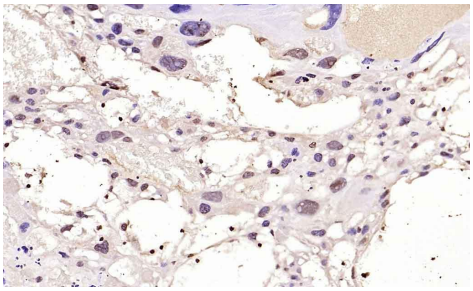


Figure 2. Paraformaldehyde-fixed, paraffin embedded (rat placenta); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (TWIST) Polyclonal Antibody, Unconjugated (SL2441R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining

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