

## Product datasheet for **RC202920**

### Twist (TWIST1) (NM\_000474) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Twist (TWIST1) (NM\_000474) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Twist  
**Synonyms:** ACS3; bHLHa38; BPES2; BPES3; CRS; CRS1; CSO; SCS; SWCOS; TWIST  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC202920 representing NM\_000474.  
Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGATGCAGGACGTGTCCAGCTCGCCAGTCTCGCCGGCCGACGACAGCCTGAGCAACAGCGAGGAAGAG
CCAGACCGGCAGCAGCCGCCGAGCGGCAAGCGCGGGGACGCAAGCGGCGCAGCAGCAGGCGCAGCGCG
GGCGGGCGCGGGGGCCCGGGAGCCGCGGGTGGGGCGTGGAGGGCGGCGAGCAGCCGGCAGCCCG
GCCAGGGCAAGCGGGCAAGAAGTCTGCGGGCTGTGGCGGCGGCGGGCGGGCGGGCGGGCGGGCGG
AGCAGCAGCGGGCGGGAGTCCGAGTCTTACGAGGAGCTGCAGACGCAGCGGGTATGGCCAACGTG
CGGGAGCGCCAGCGCACCCAGTCTGTAACGAGGCGTTCGCCGCGCTGCGGAAGATCATCCCACGCTG
CCCTCGGACAAGCTGAGCAAGATTCAGACCCCTCAAGCTGGCGGCCAGGTACATCGACTTCCTCTACCAG
GTCCTCCAGAGCGACGAGCTGGACTCCAAGATGGCAAGCTGCAGCTATGTGGCTCACGAGCGGCTCAGC
TACGCCTTCTCGGTCTGGAGGATGGAGGGGGCCTGGTCCATGTCCGCGTCCCAC
AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGAT
ATCCTGGATTACAAGGATGACGACGATAAGGTTTAA
```

**Protein Sequence:** >Peptide sequence encoded by RC202920  
Blue=ORF Red=Cloning site Green=Tag(s)

```
MMQDVSSSPVSPADDSLNSSEEPDRQQPPSGKRGRKRSSRRSAGGGAGPGGAAGGGVGGGDEPGSP
AQGKRKKSAGCGGGGGAGGGGSSGGSPQSYEELQTQRVMANVRERQRTQSLNEAFAALRKIIPTL
PSDKLSKIQTLLAARYIDFLYQVLQSDLEDSKMASCYSVAHERLSYAFSVWRMEGAWSMSASH
SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV
```

Recombinant protein using RC202920 also available, [TP302920](#)

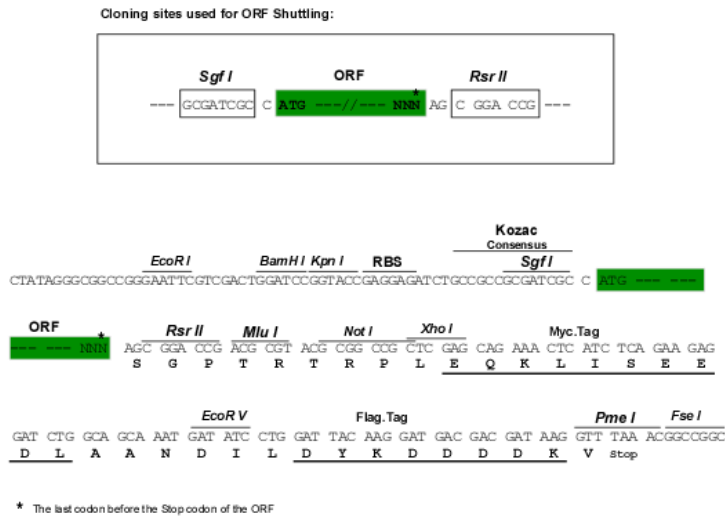
**Chromatograms:** [https://cdn.origene.com/chromatograms/mg3511\\_d01.zip](https://cdn.origene.com/chromatograms/mg3511_d01.zip)



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**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**



**ACCN:** NM\_000474

**ORF Size:** 606 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_000474.4](#)

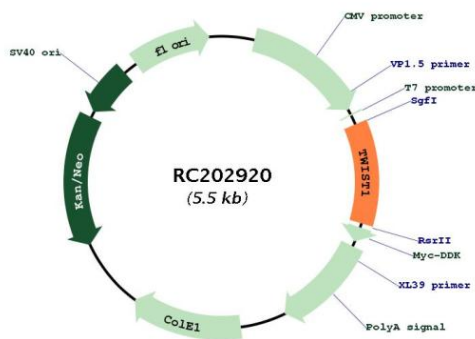
**RefSeq Size:** 1669 bp

**RefSeq ORF:** 609 bp

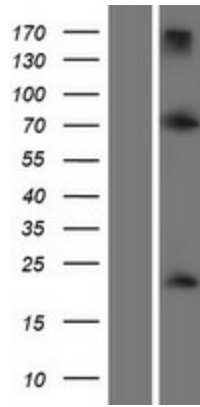
**Locus ID:** 7291  
**UniProt ID:** [Q15672](#)  
**Cytogenetics:** 7p21.1  
**Protein Families:** Druggable Genome  
**MW:** 21 kDa

**Gene Summary:** This gene encodes a basic helix-loop-helix (bHLH) transcription factor that plays an important role in embryonic development. The encoded protein forms both homodimers and heterodimers that bind to DNA E box sequences and regulate the transcription of genes involved in cranial suture closure during skull development. This protein may also regulate neural tube closure, limb development and brown fat metabolism. This gene is hypermethylated and overexpressed in multiple human cancers, and the encoded protein promotes tumor cell invasion and metastasis, as well as metastatic recurrence. Mutations in this gene cause Saethre-Chotzen syndrome in human patients, which is characterized by craniosynostosis, ptosis and hypertelorism. [provided by RefSeq, Jul 2020]

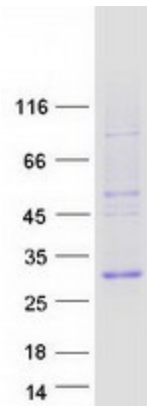
**Product images:**



Circular map for RC202920



Western blot validation of overexpression lysate (Cat# [LY424701]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202920 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TWIST1 protein (Cat# [TP302920]). The protein was produced from HEK293T cells transfected with TWIST1 cDNA clone (Cat# RC202920) using MegaTran 2.0 (Cat# [TT210002]).