

Product datasheet for **RC228253**

SHOX2 (NM_001163678) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SHOX2 (NM_001163678) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SHOX2
Synonyms:	OG12; OG12X; SHOT
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC228253 representing NM_001163678 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGAAGAACTTACGGCGTTTCGTCTCCAAGTCTTTTGACCAGAAAGTGAAGGAGAAGAAGGAGGCGATCA
CGTACCGGGAGGTGCTGGAGAGCGGGCCGCTGCGCGGGGCAAGGAGCCGACCGGCTGCACCGAGGCGGG
CCGCGACGACCGCAGCAGCCCGCAGTCCGGCGGCCGGCGGAGGCGCGCGGAGGAGGCGGAGGCGGG
GGCGGAGGAGGCGGAGGAGGTGTAGGAGGAGGAGGAGCAGGCGGAGGAGCTGGAGGAGGGCGCTCTCCC
TCCGGGAGCTGGACATGGGCGCCCGGAGAGAAGCAGGGAGCCGGGCGAGCCCGGACTGACGGAGGTGTC
CCCGGAGCTGAAAGATCGCAAAGAGGATGCGAAAGGGATGGAGGACGAAGGCCAGACCAAAATCAAGCAG
AGGCGAAGTCGGACCAATTTACCCCTGGAACAACCTCAATGAGCTGGAGAGGCTTTTTGACGAGACCCACT
ATCCCAGCCTTCATGCGAGAGGAACTGAGCCAGCGACTGGGCCTGTGCGGAGGCCCGAGTGCAGGTTTG
GTTTCAAATCGAAGAGCTAAATGTAGAAAACAAGAAAATCAACTCCATAAAGGTGTTTCATAGGGGCC
GCCAGCCAGTTTGAAGCTTGTAGAGTCGCACCTTATGTCAACGTAGGTGCTTTAAGGATGCCATTTTCAGC
AGGTTCAGGCGCAGCTGCAGCTGGACAGCGCTGTGGCGCACGCGCACCACCACCTGCATCCGCACCTGGC
CGCGCACGCGCCCTACATGATGTTCCAGCACCCCTTCGGACTGCCGCTGCCACGCTGGCCGCGGAT
TCGGCTTCGCGCCCTCGGTAGTGGCGGCCGAGCAGCCGCCAAGACCACCAGCAAGAATCCAGCATCG
CCGATCTCAGACTGAAAGCCAAAAGCACGCCGACCCCTGGGTCTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC228253 representing NM_001163678
Red=Cloning site Green=Tags(s)

```
MEELTAFVSKSFDQKVKEKKEAITYREVLESGPLRGAKEPTGCTEAGRDDRSPAVRAAGGGGGGGGGGG
GGGGGGVGGGGAGGGGAGGRSPVRELDMGAAERSREPGSPRLTEVSPELKDRKEDAKGMEDEGQTKIKQ
RRSRTNF TLEQLNELERLFDETHYPDAFMREELSQLGLSEARVQVWFQNRRAKCRKQENQLHKGVLI GA
ASQFEACRVAPYVNVGALRMPFQQVQAQLQLDSAVAHAAHHHLHPHLAAHAPYMMFPAPPFGLPLATLAAD
SASAASVVAAAAAAKTTSKNSSIADLRLKAKKHAALGL
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg8004_e03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001163678

ORF Size: 957 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.

RefSeq: [NM_001163678.2](#)

RefSeq ORF: 960 bp

Locus ID: 6474

UniProt ID: [O60902](#)

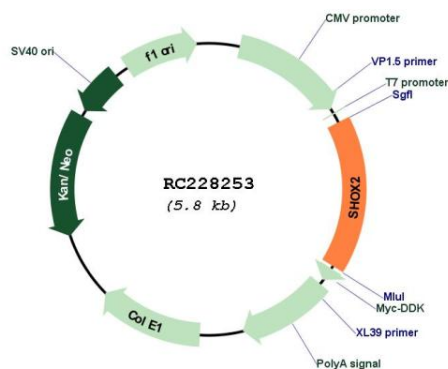
Cytogenetics: 3q25.32

Protein Families: Transcription Factors

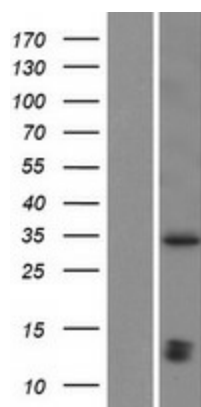
MW: 33.4 kDa

Gene Summary: This gene is a member of the homeobox family of genes that encode proteins containing a 60-amino acid residue motif that represents a DNA binding domain. Homeobox genes have been characterized extensively as transcriptional regulators involved in pattern formation in both invertebrate and vertebrate species. Several human genetic disorders are caused by aberrations in human homeobox genes. This locus represents a pseudoautosomal homeobox gene that is thought to be responsible for idiopathic short stature, and it is implicated in the short stature phenotype of Turner syndrome patients. This gene is considered to be a candidate gene for Cornelia de Lange syndrome. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2009]

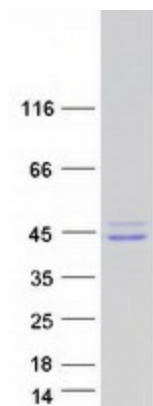
Product images:



Circular map for RC228253



Western blot validation of overexpression lysate (Cat# [LY431281]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC228253 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SHOX2 protein (Cat# [TP328253]). The protein was produced from HEK293T cells transfected with SHOX2 cDNA clone (Cat# RC228253) using MegaTran 2.0 (Cat# [TT210002]).