

Product datasheet for **RC206550**

Nkx2.5 (NKX2-5) (NM_004387) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nkx2.5 (NKX2-5) (NM_004387) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nkx2.5
Synonyms:	CHNG5; CSX; CSX1; HLHS2; NKX2.5; NKX2E; NKX4-1; VSD3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC206550 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTCCCGAGCCCTGCTCTCACGCCACGCCCTTCTCAGTCAAAGACATCCTAAACCTGGAACAGCAGC
AGCGCAGCCTGGCTGCCGCCGAGAGCTCTGCCCCGCTGGAGGCGACCCTGGCGCCCTCTCTGCAT
GCTGGCCGCTTCAAGCCAGAGGCTACGCTGGCCCCGAGGCGGCTGCGCCGGCCTCCAGAGCTGCGC
GCAGAGCTGGCCGCGCGCTTACCAGGCAAGTGTGCGTCTGCCTTCCCGCCGCCCGCCTTCTATC
CACGTGCCTACAGCGACCCGACCCAGCAAGGACCCTAGAGCCGAAAAGAAAGAGCTGTGCGCGTGA
GAAGGCGGTGGAGCTGGAGAAGACAGAGCGGACAAACGCGGAGCGCCCCGGGCGCGACGGCGGAGGAAG
CCGCGCGTGTCTTCTCGCAGGCGCAGGTCTATGAGCTGGAGCGCGCTTCAAGCAGCAGCGGTACCTGT
CGGCCCCGAACGCGACCCAGCTGGCCAGCGTGTGAAACTCACGTCCACGCGAGTCAAGATCTGGTTCCA
GAACCGGCGCTACAAGTGAAGCGGCAGCGGCAGGACCAGACTCTGGAGCTGGTGGGGCTGCCCGCCG
CCGCGCCGCTGCCCGCAGGATCGCGGTGCCAGTGTGGTGGCGGATGGCAAGCCATGCCTAGGGGACT
CGGCGCCCTACGCGCCTGCCTACGGCGTGGCCCTCAATCCCTACGGTTATAACGCTACCCCGCCTATCC
GGTTACGGCGGCGGGCCTGCAGCCCTGGCTACAGCTGCACTGCCGCTTACCCCGCGGGCCTTCCCA
CGCAGCCGCGCACTGCCGCCCAACAACAACCTCGTGAACCTCGGCGTGGGACTTGAATGCGGTTCC
AGAGCCCCGGGATTCGCGAGAGCAACTCGGGAGTGTCCAGCTGCATGGTATCCGAGCCTGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC206550 protein sequence
Red=Cloning site Green=Tags(s)

MFPSPAL TPTPF SVKDILNLEQQQRSLAAAGEL SARLEATLAPSSCMLAAFKEAYAGPEAAAPGLPELR
 AELGRAPSPAKCASAFPAAPAFYPRAYSDPDPKDPRAEKELCALQKAVELEKTEADNAERPRARRRRK
 PRVLF SQAQVYELERRFKQQRYSAPERDQLASVLKLTSTQVKIWFQNRRYKCKRQRQDTLEL VGLPPP
 PPPPARRIAVPVLRDGGKPCLDGSAPYAPAYGVGLNPGYNAYPAYPGYGAACSPGYSC TAAYPAGPSP
 AQPATAAANNFVNFVGVGLNAVQSPGIPQSNQSGVSTLHGIRAW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6016_g10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004387

ORF Size: 972 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_004387.4](#)

RefSeq Size: 1669 bp

RefSeq ORF: 975 bp

Locus ID: 1482

UniProt ID: [P52952](#)

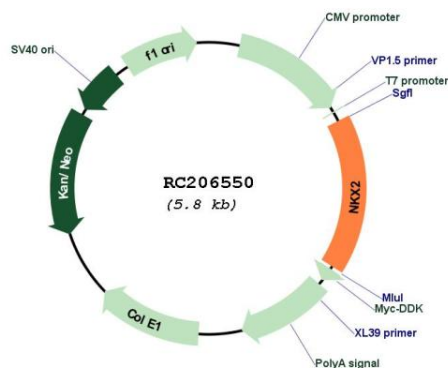
Cytogenetics: 5q35.1

Protein Families: Transcription Factors

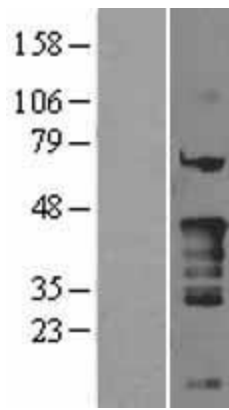
MW: 34.9 kDa

Gene Summary: This gene encodes a homeobox-containing transcription factor. This transcription factor functions in heart formation and development. Mutations in this gene cause atrial septal defect with atrioventricular conduction defect, and also tetralogy of Fallot, which are both heart malformation diseases. Mutations in this gene can also cause congenital hypothyroidism non-goitrous type 5, a non-autoimmune condition. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2009]

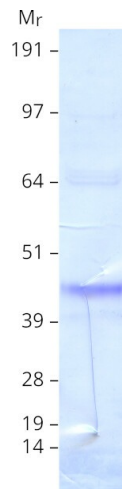
Product images:



Circular map for RC206550



Western blot validation of overexpression lysate (Cat# [LY401397]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206550 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NKX2-5 protein (Cat# [TP306550]). The protein was produced from HEK293T cells transfected with NKX2-5 cDNA clone (Cat# RC206550) using MegaTran 2.0 (Cat# [TT210002]).