

Product datasheet for **RR208300**

Sox6 (NM_001024751) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sox6 (NM_001024751) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sox6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RR208300 representing NM_001024751
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCCTTCCAAGCAAGCCACCTCTCCATTTGCCTGTACAGTGGATGGAGAGGAAACAATGACCCAGGATT
 TGACCTCAAGGGAAAAGGAAGAGGGCAGTGATCAACACCCGGCCTCCCATCTGCCTCTGCACCCATAAT
 GCACAACAAACCTCACTCTGAGGAGCTGCCGACGCTTGTCAGTACCATTCAACAAGATGCTGACTGGGAC
 AGCGTTTGTCTATCTCAGCAAAGAATGGAGTCAAGAAATAAAGTTATGTTCCCTATATTCCTCCGAA
 ATACGTCTACCTCACCACATAAGCCTGACGAAGGGAGTCGGGAGCGGAAATAATGAACAGTGTTACTTT
 TGGAACCCCGGAACGCCGAAAGGGAGCCTTGCCGATGTGGTGGATACGCTGAAGCAGAAGAAGCTGGAG
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 GATCCAGCAGGTTCAGGGGCACATGCCTCCGCTCATGATCCCAATTTTTCCACATGACCAGCGGACCTTG
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 CCACCAAACCTCAGCAGGGCGGTCTCACCTACTGGGATAAAAAATGAAAAGAGAGGGACCAGCCCTGTAA
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AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR208300 representing NM_001024751
Red=Cloning site Green=Tags(s)

MSSKQATSPFACTVDGEETMTQDLTSREKEEGSDQHPASHLPLHPIMHNKPHSEELPTLVSTIQQDADWD
SVLSSQQRMESENKLCSLYSFRNTSTSPHKPDEGSREREIMNSVTFGTPERRKGLADVDTLKQKKLE
EMTRTEQEDSSCKEKLKSKDWKEKMERLNTSELLGEIKGTPESLAEKERQLSTMITQLISLREQLLAHD
EQKKLAASQIEKQRQQMDLARQQEQIARQQQLLQQQHKINLLQQQIQQVQGHMPPLMIPIFPHDQRTL
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PPNSAGAVSPTGIKNEKRGTSPTVQVKDETTAQPPLNLSSRPKTAEPVKSPTSPTQSLFPASKTSPVNLPN
KSSIPSPIGGSLGRGSSLDILSSLNSPALFGDQDTVMKAIQEARKMREIQREQQQPHGVDGKLSMNS
MGLSNCRNEKERTRFENLGPQLTGKSSDGKLGPGVIDLTRPEDAEGSKAMNGSAAKLQYYCWPTGGAT
VAEARVYRDARGRASSEPHIKRPMNAFMVWAKDERRKILQAFPMHNSNISKILGSRWKSMSNQEKQPY
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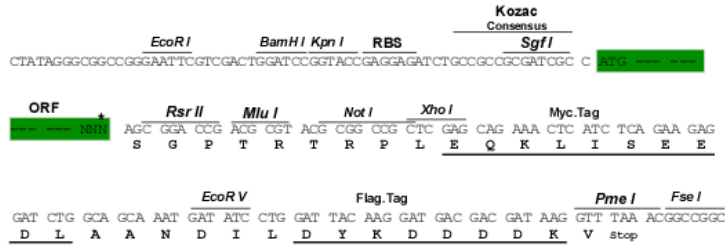
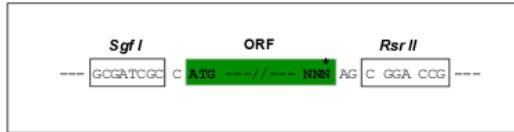
SGP^{TRTRPLEQKLI SEEDLAANDILDYKDDDDKV}

Chromatograms: https://cdn.origene.com/chromatograms/ja2016_g02.zip

Restriction Sites: Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001024751

ORF Size: 2361 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_001024751.1](#), [NP_001019922.1](#)

RefSeq Size: 2724 bp

RefSeq ORF: 2364 bp

Locus ID: 293165

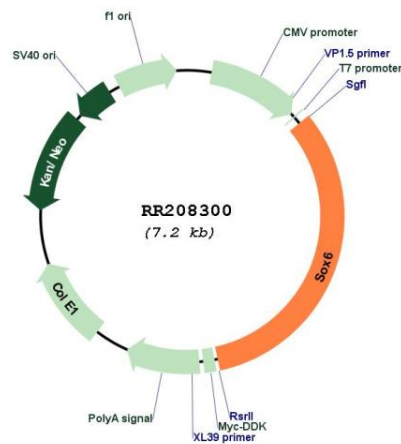
UniProt ID: [Q4V8G3](#)

Cytogenetics: 1q35

MW: 87.8 kDa

Gene Summary:

Transcription factor that plays a key role in several developmental processes, including neurogenesis, chondrocytes differentiation and cartilage formation (By similarity). Specifically binds the 5'-AACAAAT-3' DNA motif present in enhancers and super-enhancers and promotes expression of genes important for chondrogenesis (By similarity). Required for overt chondrogenesis when condensed prechondrocytes differentiate into early stage chondrocytes: SOX5 and SOX6 cooperatively bind with SOX9 on active enhancers and super-enhancers associated with cartilage-specific genes, and thereby potentiate SOX9's ability to transactivate (PubMed:26150426). Not involved in precartilaginous condensation, the first step in chondrogenesis, during which skeletal progenitors differentiate into prechondrocytes (By similarity). Together with SOX5, required to form and maintain a pool of highly proliferating chondroblasts between epiphyses and metaphyses, to form columnar chondroblasts, delay chondrocyte prehypertrophy but promote hypertrophy, and to delay terminal differentiation of chondrocytes on contact with ossification fronts (By similarity). Binds to the proximal promoter region of the myelin protein MPZ gene, and is thereby involved in the differentiation of oligodendroglia in the developing spinal tube (By similarity). Binds to the gene promoter of MBP and acts as a transcriptional repressor (By similarity). [UniProtKB/Swiss-Prot Function]

Product images:

Circular map for RR208300