

Product datasheet for **RN208300**

Sox6 (NM_001024751) Rat Untagged Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | Sox6 (NM_001024751) Rat Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Sox6 |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Cell Selection: | Neomycin |



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Fully Sequenced ORF: >RN208300 representing NM_001024751
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCCTCCAAGCAAGCCACCTCTCCATTTGCCTGTACAGTGGATGGAGAGGAAACAATGACCCAGGATT
 TGACCTCAAGGAAAAGGAAGAGGGCAGTGATCAACACCCGGCCTCCCATCTGCCTCTGCACCCATAAT
 GCACAACAAACCTCACTCTGAGGAGCTGCCGACGCTTGTCACTACCATTCAACAAGATGCTGACTGGGAC
 AGCGTTTGTCTCTCAGCAAAGAATGGAGTCAGAGAATAATAAGTTATGTTCCCTATATTCTTCCGAA
 ATACGTCTACCTACCACATAAGCCTGACGAAGGGAGTCGGGAGCGGAAATAATGAACAGTGTTACTTT
 TGGAACCCCGAAACGCCCAAAGGGAGCCTTGCCGATGTGGTGGATACGCTGAAGCAGAAGAAGCTGGAG
 GAGATGACTCGGACGGAACAAGAGGATTCCTCTGCATGGAAAACTACTTTCAAAGATTGGAAGGAAA
 AAATGGAAGACTAAATACGAGTGAACCTCTTGGAGAAATCAAAGGTACACCTGAGAGCCTTGACAGAA
 AGAACGGCAACTCTCCACCATGATTACCCAGCTGATCAGCTTGGGGAGCAGCTCCTGGCAGCGCAGAT
 GAACAGAAAAAGCTGGCAGCCTCGCAGATCGAGAAACAGCGGCAGCAAATGGACCTTGCTCGCCAACAGC
 AAGAACAGATCGCAAGACAACAGCAGCAACTTCTACAGCAGCAGCACAAGATTAATCTCCTGCAGCAACA
 GATCCAGCAGGTTCAGGGGCACATGCCTCCGCTCATGATCCCAATTTTTCCACATGACCAGCGGACCTTG
 GCAGCAGCTGTGCCGCCAACAGGGATTCTCTTCCCCCTGGAATAACATAACAAGCCAGGTGATAACT
 ACCCCGTACAGTTCATTCGTCACAATGGCAGCTGTCTGTCTTCTGGACTCAGCCCTTTACAGCTTCA
 GCAGCTCTATGCCGCTCAGCTGGCCAGCATGCAGGTGTACCTGGAGCAAAGTGCCATCAACTCCGCAG
 CCACCAAACCTCAGCAGGGCGGTCTCACCTACTGGGATAAAAAATGAAAAGAGAGGGACCAGCCCTGTAA
 CTAAGTTAAGGATGAAACAACAGCCACGCCACTGAATCTCTCATCCCGGCCGAAGACAGCAGAGCCTGT
 GAAGTCCCAACATCTCCACCCAGAGCCTCTCCAGCCAGCAAACAGCCCTGTCAACCTGCCAAAC
 AAGAGCAGCATCCCCAGCCCATCGGGGGAAGCCTGGGGAGAGGATCCTCTTTAGATATACTATCCAGTC
 TCAACTCTCCTGCCCTGTTTGGGGACCAGGACACAGTGTGAAAGCTATCCAGGAGGCTCGGAAGATGCG
 AGAACAGATCCAGCGGGAGCAGCAACAGCAGCCGACGGAGTTGATGGGAAGCTGTCTCCATGAACAGC
 ATGGGGCTGAGCAACTGCAGGAATGAGAAGGAAAGAACACGCTTTGAGAACCTGGGTCCCAATTAACAG
 GAAAGTCAAGTGAAGTGGAAAGCTGGGCCCTGGTGTCTCGATCTGACTCGGCCAGAGGACGCAGAAGG
 AAGCAAAGCAATGAATGGCTCTGCAGCTAAACTACAGCAGTATTATTGTTGGCCAACAGGAGCGCCACT
 GTGGCTGAAGCAGCGTCTACAGGGATGCCGAGGCCGTGCCAGCAGCGACCCACATCAAGCGACCAA
 TGAATGCGTTCATGGTTTGGGCAAAGGACGAAAGGAGGAAAATCTTTCAGGCCTTCCCTGACATGCATAA
 CTCCAACATTAGCAAAATCTTAGGATCTCGCTGGAAATCCATGTCCAACAGGAGAAGCAACCTTACTAT
 GAAGAGCAGGCCCGGCTAAGCAAAATCCACCTAGAGAAGTACCCAAACTACAAGTACAAACCCCGGCCGA
 AGCGCACGTGCATTGTGGACGGCAAGAAGCTCCGGATCGGGGAGTACAAGCAGCTGATGCGCTCACGAAG
 GCAGGAGATGCGACAGTTCTTCACTGTGGGGCAACAGCCTCAGATTCCCATCACCAAGGAAACAGGTGTT
 GTGTATCCTGGTGCTATTACTATGGCAACGACCACACCATCACCTCAGATGACATCTGACTGCTTAGCA
 CCTCTGCCAGCCAGAGCCAGCCTCCCTGTCTCCAGAGCACGTATGGTATGAAGATGGACGGCCGAG
 CCTGGCTGGGAACGACATGATTAATGGCGAGGATGAAATGGAAGCCTATGACGACTACGAAGATGATCCC
 AAATCAGACTATAGCAGCGAAAACGAGGCCCCAGAGCCTGTCACTGCCAAC**TGA**

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-RsrII
ACCN: NM_001024751
Insert Size: 2364 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](#)

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

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]