

Product datasheet for **TR702662**

Sox6 Rat shRNA Plasmid (Locus ID 293165)

Product data:

Product Type: shRNA Plasmids

Product Name: Sox6 Rat shRNA Plasmid (Locus ID 293165)

Locus ID: 293165

Vector: pRS (TR20003)

E. coli Selection: Ampicillin

Mammalian Cell Selection: Puromycin

Format: Retroviral plasmids

Components: Sox6 - Rat, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 293165). 5µg purified plasmid DNA per construct
29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.

RefSeq: [NM_001024751](#), [NM_001024751.1](#), [BC097403](#)

UniProt ID: [Q4V8G3](#)

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]



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- shRNA Design:** These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).
- Performance Guaranteed:** OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.
- For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).