

## Product datasheet for **SR411706**

### Six3 Mouse siRNA Oligo Duplex (Locus ID 20473)

#### Product data:

Product Type:	siRNA Oligo Duplexes
Purity:	HPLC purified
Quality Control:	Tested by ESI-MS
Sequences:	Available with shipment
Stability:	One year from date of shipment when stored at -20°C.
# of transfections:	Approximately 330 transfections/2nmol in 24-well plate under optimized conditions (final conc. 10 nM).
Note:	Single siRNA duplex (10nmol) can be ordered.
RefSeq:	<a href="#">NM_011381</a>
UniProt ID:	<a href="#">Q62233</a>
Synonyms:	E130112M24Rik; Six3a; Six3alpha; Six3b; Six3beta
Components:	Six3 (Mouse) - 3 unique 27mer siRNA duplexes - 2 nmol each (Locus ID 20473) Included - SR30004, Trilencer-27 Universal Scrambled Negative Control siRNA Duplex - 2 nmol Included - SR30005, RNase free siRNA Duplex Resuspension Buffer - 2 ml



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**Summary:**

Transcriptional regulator which can act as both a transcriptional repressor and activator by binding a ATTA homeodomain core recognition sequence on these target genes. During forebrain development represses WNT1 expression allowing zona limitans intrathalamica formation and thereby ensuring proper antero-posterior patterning of the diencephalon and formation of the rostral diencephalon (PubMed:18094027). Acts as a direct upstream activator of SHH expression in the rostral diencephalon ventral midline and that in turn SHH maintains its expression (PubMed:18775421). In addition, Six3 activity is required for the formation of the telencephalon. During postnatal stages of brain development is necessary for ependymal cell maturation by promoting the maturation of radial glia into ependymal cells through regulation of neuroblast proliferation and migration (PubMed:22071110). Acts on the proliferation and differentiation of neural progenitor cells through activating transcription of CCND1 AND CCND2 (PubMed:17576749). During early lens formation plays a role in lens induction and specification by activating directly PAX6 in the presumptive lens ectoderm (PubMed:17066077). In turn PAX6 activates SIX3 resulting in activation of PDGFRA and CCND1 promoting cell proliferation (PubMed:12072567). Also is required for the neuroretina development by directly suppressing WNT8B expression in the anterior neural plate territory (PubMed:20890044). Its action during retina development and lens morphogenesis is TLE5 and TLE4-dependent manner. Furthermore, during eye development regulates several genes expression. Before and during early lens development represses the CRYGF promoter by binding a SIX repressor element (PubMed:11139622). Directly activates RHO transcription, or cooperates with CRX or NRL (PubMed:17666527). Six3 functions also in the formation of the proximodistal axis of the optic cup (PubMed:12163408), and promotes the formation of optic vesicles-like structures (PubMed:11458394). During pituitary development, acts in parallel or alternatively with HESX1 to control cell proliferation through Wnt/beta-catenin pathway (PubMed:18694563). Plays a role in eye development by suppressing WNT1 expression and in dorsal-ventral patterning by repressing BMP signaling pathway (By similarity).[UniProtKB/Swiss-Prot Function]

**Performance Guaranteed:**

OriGene guarantees that at least two of the three Dicer-Substrate duplexes in the kit will provide at least 70% or more knockdown of the target mRNA when used at 10 nM concentration by quantitative RT-PCR when the TYE-563 fluorescent transfection control duplex (cat# SR30002) indicates that >90% of the cells have been transfected and the HPRT positive control (cat# SR30003) provides 90% knockdown efficiency.

For non-conforming siRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the siRNA kit. To arrange for a free replacement with newly designed duplexes, 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 siRNA control (quantitative RT-PCR data required).