TERT siRNA – Telomerase Reverse Transcriptase (Mouse)

PRODUCT OVERVIEW

Product Name	TERT, siRNA
Full Product Name	TERT siRNA (Mouse)
Product Gene Name	TERT sirna
Product Synonym Names	Telomerase reverse transcriptase; Telomerase catalytic subunit
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	TERT siRNA (Mouse) is a target-specific 19-23 nt siRNA oligo duplexes designed to knock down gene expression.
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Molecular Weight	127,978 Da
3D Structure	ModBase 3D Structure for O70372
Negative Control	siRNA Negative Control (Catalog# MBS8241404) is a non-targeting 21 nt siRNA recommended as a negative control for experiments using targeted siRNA transfection.
Quality Control	Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.
Directions for Use	We recommends transfection with 100 nM siRNA 48 to 72 hours prior to cell lysis. Before resuspending, briefly centrifuge the tube to ensure the lyophilized siRNA is at the bottom of the tube. Resuspend the siRNA oligos to an appropriate concentration with DEPC water. For each vial, suitable for 250 transfections in 24 well plate (20 pmol for each well).
Components	We offer pre-designed sets of 3 different target-specific siRNA oligo duplexes of mouse TERT gene. Each vial contains 5 nmol of lyophilized siRNA. The duplexes can be transfected individually or pooled together to achieve knockdown of the target gene, which is most commonly assessed by qPCR or western blot. Our siRNA oligos are also chemically modified (2'-OMe) at no extra charge for increased stability and enhanced knockdown in vitro and in vivo.
Applications Tested/Suitable for TERT sirna	RNA Interference (RNAi)
Related Product Information for TERT sirna	MBS8230171 is an siRNA targeting TERT. Also known as TERT siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit TERT expression using RNA interference
Other Notes	Small volumes of TERT sirna vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TERT. It may not necessarily be applicable to this product.

NCBI GI #	6678291

NCBI GeneID	21752
NCBI Accession #	NP_033380.1
UniProt Primary Accession #	O70372
UniProt Secondary Accession #	O35432; Q9JK99
UniProt Related Accession #	O70372
GenBank Nucleotide #	NM_009354.1
NCBI Official Full Name	telomerase reverse transcriptase
NCBI Official Synonym Full Names	telomerase reverse transcriptase
NCBI Official Symbol	Tert
NCBI Official Synonym Symbols	TR; TP2; TRT; EST2; TCS1
UniProt Protein Name	Telomerase reverse transcriptase
UniProt Synonym Protein Names	Telomerase catalytic subunit
Protein Family	Telomerase reverse transcriptase
UniProt Gene Name	Tert
UniProt Entry Name	TERT_MOUSE
NCBI Protein Information	telomerase reverse transcriptase
UniProt Comments for TERT	TERT: telomerase reverse transcriptase is a ribonucleoprotein polymerase that maintains telomere ends by addition of the telomere repeat TTAGGG. The holoenzyme consists of TERT and an RNA component which serves as a template for the telomere repeat. Telomerase expression plays a role in cellular senescence, as it is normally repressed in postnatal somatic cells resulting in progressive shortening of telomeres. Deregulation of telomerase expression in somatic cells may be involved in oncogenesis. Studies in mouse suggest that telomerase also participates in chromosomal repair, since de novo synthesis of telomere repeats may occur at double-stranded breaks. Alternatively spliced isoforms have been identified, although the full-length sequence of some variants has not been determined. Protein type: EC 2.7.7.49; DNA-binding; Nucleolus; Transferase Cellular Component: nucleoplasm; chromosome, telomeric region; PML body; mitochondrion; telomerase holoenzyme complex; cytoplasm; chromosome; nucleus; ribonucleoprotein complex Molecular Function: transferase activity; telomerase activity; protein binding; protein homodimerization activity; RNA-directed RNA polymerase activity; DNA binding; metal ion binding; telomeric DNA binding; RNA-directed DNA polymerase activity; telomeric template RNA reverse transcriptase activity; tRNA binding; nucleotidyltransferase activity Biological Process: mitochondrion organization and biogenesis; DNA strand elongation; positive regulation of hair cycle; RNA-dependent DNA replication; positive regulation of nitric-oxide synthase activity; telomere maintenance via telomerase; age-dependent telomere shortening; RNA interference, production of siRNA; positive regulation of Wnt receptor signaling pathway
Research Articles on TERT	**1.** TERT is a regulator of MYC stability in cancer. Reactivation of TERT, a direct transcriptional MYC target in tumors, provides a feed-forward mechanism to potentiate MYC-dependent oncogenesis.
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