CENPT siRNA – Centromere Protein T (Human)

PRODUCT OVERVIEW

Product Name	CENPT, siRNA
Full Product Name	CENPT siRNA (Human)
Product Gene Name	CENPT sirna
Product Synonym Names	C16orf56; ICEN22; Centromere protein T; CENP-T; Interphase centromere complex protein 22
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	CENPT siRNA (Human) 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	16,434 Da
OMIM	611510
3D Structure	ModBase 3D Structure for Q96BT3
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 human CENPT 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 CENPT sirna	RNA Interference (RNAi)
Related Product Information for CENPT sirna	MBS8238261 is an siRNA targeting CENPT. Also known as CENPT siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit CENPT expression using RNA interference
Other Notes	Small volumes of CENPT 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 CENPT. It may not necessarily be applicable to this product.

NCBI GI #	126722969
NCBI GeneID	80152
NCBI Accession #	NP_079358.3
UniProt Primary Accession #	Q96BT3
UniProt Secondary Accession #	Q96I29; Q96IC6; Q96NK9; Q9H901
UniProt Related Accession #	Q96BT3
GenBank Nucleotide #	NM_025082.3
NCBI Official Full Name	centromere protein T
NCBI Official Synonym Full Names	centromere protein T
NCBI Official Symbol	CENPT
NCBI Official Synonym Symbols	CENP-T; C16orf56
UniProt Protein Name	Centromere protein T
UniProt Synonym Protein Names	Interphase centromere complex protein 22
Protein Family	Centromere protein
UniProt Gene Name	CENPT
UniProt Synonym Gene Names	C16orf56; ICEN22; CENP-T
UniProt Entry Name	CENPT_HUMAN
NCBI Protein Information	centromere protein T
NCBI Summary for CENPT	The centromere is a specialized chromatin domain, present throughout the cell cycle, that acts as a platform on which the transient assembly of the kinetochore occurs during mitosis. All active centromeres are characterized by the presence of long arrays of nucleosomes in which CENPA (MIM 117139) replaces histone H3 (see MIM 601128). CENPT is an additional factor required for centromere assembly (Foltz et al., 2006 [PubMed 16622419]).[supplied by OMIM, Mar 2008]

UniProt Comments for CENPT	CENPT: Component of the CENPA-NAC (nucleosome-associated) complex, a complex that plays a central role in assembly of kinetochore proteins, mitotic progression and chromosome segregation. The CENPA-NAC complex recruits the CENPA-CAD (nucleosome distal) complex and may be involved in incorporation of newly synthesized CENPA into centromeres. Part of a nucleosome- associated complex that binds specifically to histone H3-containing nucleosomes at the centromere, as opposed to nucleosomes containing CENPA. Component of the heterotetrameric CENP-T-W-S-X complex that binds and supercoils DNA, and plays an important role in kinetochore assembly. CENPT has a fundamental role in kinetochore assembly and function. It is one of the inner kinetochore proteins, with most further proteins binding downstream. Required for normal chromosome organization and normal progress through mitosis. Component of the CENPA-NAC complex, at least composed of CENPA, CENPC, CENPH, CENPM, CENPN, CENPT and MLF1IP/CENPU. The CENPA-NAC complex interacts with the CENPA-CAD complex, composed of CENPI, CENPK, CENPL, CENPO, CENPP, CENPQ, CENPR and CENPS. Part of a centromere complex consisting of CENPA, CENPT and CENPW. Part of a centromere complex consisting of histone H3, CENPT and CENPW. Interacts (via N-terminus) with the NDC80 complex (Probable). Component of a heterotetrameric CENP-T-W-S-X complex composed of APITD1/CENPS, STRA13/CENPX, CENPT and CENPW. Interacts directly with CENPW. Binds DNA. Belongs to the CENPT family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: DNA replication Chromosomal Location of Human Ortholog: 16q22.1 Cellular Component: nucleoplasm; kinetochore; nucleus; cytosol; chromosome, pericentric region Molecular Function: protein binding; DNA binding; protein heterodimerization activity Biological Process: mitosis; nucleosome assembly; kinetochore assembly; DNA replication-independent nucleosome assembly at centromere; cell division; mitotic cell cycle; chromosome organization and biogenesis; chromosome segregation
Research Articles on CENPT	**1.** CSN5 regulates the stability of the inner kinetochore components CENP-T and CENP-W, providing the first direct link between CSN5 and the mitotic apparatus, highlighting the role of CSN5 as a multifunctional cell cycle regulator.
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