PTGR1 siRNA – Prostaglandin Reductase 1 (Rat)

PRODUCT OVERVIEW

Product Name	PTGR1, siRNA
Full Product Name	PTGR1 siRNA (Rat)
Product Gene Name	PTGR1 sirna
Product Synonym Names	DIG1; LTB4DH; Prostaglandin reductase 1; PRG-1; 15-oxoprostaglandin 13-reductase; Dithiolethione-inducible gene 1 protein; D3T-inducible gene 1 protein; DIG-1; NADP-dependent leukotriene B4 12-hydroxydehydrogenase
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	PTGR1 siRNA (Rat) 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	35,718 Da
3D Structure	ModBase 3D Structure for P97584
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 rat PTGR1 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 PTGR1 sirna	RNA Interference (RNAi)
Related Product Information for PTGR1 sirna	MBS8207905 is an siRNA targeting PTGR1. Also known as PTGR1 siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit PTGR1 expression using RNA interference
Other Notes	Small volumes of PTGR1 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 PTGR1. It may not necessarily be applicable to this product.

NCBI GI #	20302022

NCBI GeneID	192227
NCBI Accession #	NP_620218.1
UniProt Primary Accession #	P97584
UniProt Secondary Accession #	Q5EBD3
UniProt Related Accession #	P97584
GenBank Nucleotide #	NM_138863.2
NCBI Official Full Name	prostaglandin reductase 1
NCBI Official Synonym Full Names	prostaglandin reductase 1
NCBI Official Symbol	Ptgr1
NCBI Official Synonym Symbols	Dig1; Ltb4dh
UniProt Protein Name	Prostaglandin reductase 1
UniProt Synonym Protein Names	15-oxoprostaglandin 13-reductase (EC:1.3.1.48); Dithiolethione-inducible gene 1 protein; D3T-inducible gene 1 protein; DIG-1; NADP-dependent leukotriene B4 12-hydroxydehydrogenase (EC:1.3.1.74)
Protein Family	Prostaglandin reductase
UniProt Gene Name	Ptgr1
UniProt Synonym Gene Names	Dig1; Ltb4dh; PRG-1; D3T-inducible gene 1 protein; DIG-1
UniProt Entry Name	PTGR1_RAT
NCBI Protein Information	prostaglandin reductase 1
NCBI Summary for PTGR1	may play a role in inhibition of chemically induced tumorigenesis [RGD, Feb 2006]
UniProt Comments for PTGR1	LTB4DH: Functions as 15-oxo-prostaglandin 13-reductase and acts on 15-oxo-PGE1, 15-oxo-PGE2 and 15-oxo-PGE2-alpha. Has no activity towards PGE1, PGE2 and PGE2-alpha. Catalyzes the conversion of leukotriene B4 into its biologically less active metabolite, 12-oxo-leukotriene B4. This is an initial and key step of metabolic inactivation of leukotriene B4. Belongs to the NADP-dependent oxidoreductase L4BD family. Protein type: Oxidoreductase; EC 1.3.1.48; EC 1.3.1.74 Cellular Component: cytoplasm Molecular Function: 15-oxoprostaglandin 13-oxidase activity; zinc ion binding; 2-alkenal reductase activity Biological Process: response to toxin; prostaglandin metabolic process
Research Articles on PTGR1	**1.** The increased expression and activity of PTGR1 in liver carcinogenesis encourage further research aimed at understanding the metabolic role of PTGR1 in HCC and its potential application for human cancer diagnosis and treatment
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