G6PDX siRNA – Glucose-6-Phosphate 1-Dehydrogenase X (Mouse)

PRODUCT OVERVIEW

Product Name	G6PDX, siRNA
Full Product Name	G6PDX siRNA (Mouse)
Product Gene Name	G6PDX sirna
Product Synonym Names	G6PD; G6PD-1; Glucose-6-phosphate 1-dehydrogenase X; G6PD
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	G6PDX 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	59,263 Da
3D Structure	ModBase 3D Structure for Q00612
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 G6PDX 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 G6PDX sirna	RNA Interference (RNAi)
Related Product Information for G6PDX sirna	MBS8210642 is an siRNA targeting G6PDX. Also known as G6PDX siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit G6PDX expression using RNA interference
Other Notes	Small volumes of G6PDX 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 G6PDX. It may not necessarily be applicable to this product.

NCBI GI #	6996917

NCBI GeneID	14381
NCBI Accession #	NP_032088.1
UniProt Primary Accession #	Q00612
UniProt Related Accession #	Q00612
GenBank Nucleotide #	NM_008062.2
NCBI Official Full Name	glucose-6-phosphate 1-dehydrogenase X
NCBI Official Synonym Full Names	glucose-6-phosphate dehydrogenase X-linked
NCBI Official Symbol	G6pdx
NCBI Official Synonym Symbols	G28A; G6pd; Gpdx
UniProt Protein Name	Glucose-6-phosphate 1-dehydrogenase X
Protein Family	Glucose-6-phosphate 1-dehydrogenase
UniProt Gene Name	G6pdx
UniProt Synonym Gene Names	G6pd; G6pd-1; G6PD
UniProt Entry Name	G6PD1_MOUSE
NCBI Protein Information	glucose-6-phosphate 1-dehydrogenase X
UniProt Comments for G6PDX	G6PD: glucose-6-phosphate dehydrogenase. A cytosolic enzyme encoded by a housekeeping X-linked gene whose main function is to produce NADPH, a key electron donor in the defense against oxidizing agents and in reductive biosynthetic reactions. G6PD is remarkable for its genetic diversity. Many variants of G6PD, mostly produced from missense mutations, have been described with wide ranging levels of enzyme activity and associated clinical symptoms. G6PD deficiency may cause neonatal jaundice, acute hemolysis, or severe chronic non-spherocytic hemolytic anemia. Two splice variant isoforms have been described. The long isoform is found in lymphoblasts, granulocytes and sperm. Protein type: Carbohydrate Metabolism - pentose phosphate pathway; EC 1.1.1.49; Other Amino Acids Metabolism - glutathione; Oxidoreductase; Cell development/differentiation Cellular Component: centrosome; internal side of plasma membrane; intracellular membrane-bound organelle; membrane; cytoplasm; microtubule organizing center; nucleus; cytosol Molecular Function: identical protein binding; glucose-6-phosphate dehydrogenase activity; protein homodimerization activity; oxidoreductase activity; NADP binding; carbohydrate binding; glucose binding Biological Process: NADPH regeneration; pentose-phosphate shunt; erythrocyte development; interleukin-12 production; erythrocyte maturation; ribose phosphate biosynthetic process; pentose-phosphate shunt, oxidative branch; glucose 6-phosphate metabolic process; cytokine production; glucose metabolic process; regulation of multicellular organism growth; NADP biosynthetic process; cholesterol biosynthetic process; NADP metabolic process; angiotensin mediated vasodilation involved in regulation of systemic arterial blood pressure; response to ethanol; glutathione metabolic process; angiotensin mediated vasoconstriction involved in regulation of systemic arterial blood pressure; carbohydrate metabolic process; regulation of neuron apoptosis; interleukin-10 production; response to oxidative stress; pentose biosynthetic process
Research Articles on G6PDX	**1.** yeast hydrolysate supplementation suppressed body fat accumulation by attenuating fatty acid synthesis through the downregulation of hepatic G6PD and malic enzyme activities.
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