EREG siRNA – Proepiregulin Preproprotein (Human)

PRODUCT OVERVIEW

Product Name	EREG, siRNA
Full Product Name	EREG siRNA (Human)
Product Gene Name	EREG sirna
Product Synonym Names	Proepiregulin
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	EREG 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	19,044 Da
OMIM	602061
3D Structure	ModBase 3D Structure for O14944
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 EREG 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 EREG sirna	RNA Interference (RNAi)
Related Product Information for EREG sirna	MBS8215306 is an siRNA targeting EREG. Also known as EREG siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit EREG expression using RNA interference
Other Notes	Small volumes of EREG 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 EREG. It may not necessarily be applicable to this product.

NCBI GI #	4557567
NCBI GeneID	2069
NCBI Accession #	NP_001423.1
UniProt Primary Accession #	O14944
UniProt Secondary Accession #	Q6FH69; B2RC66
UniProt Related Accession #	O14944
GenBank Nucleotide #	NM_001432.2
NCBI Official Full Name	proepiregulin preproprotein
NCBI Official Synonym Full Names	epiregulin
NCBI Official Symbol	EREG
NCBI Official Synonym Symbols	ER; Ep; EPR
UniProt Protein Name	Proepiregulin
Protein Family	Proepiregulin
UniProt Gene Name	EREG
UniProt Synonym Gene Names	EPR
UniProt Entry Name	EREG_HUMAN
NCBI Protein Information	proepiregulin
NCBI Summary for EREG	This gene encodes a secreted peptide hormone and member of the epidermal growth factor (EGF) family of proteins. The encoded protein is a ligand of the epidermal growth factor receptor (EGFR) and the structurally related erb-b2 receptor tyrosine kinase 4 (ERBB4). The encoded protein may be involved in a wide range of biological processes including inflammation, wound healing, oocyte maturation, and cell proliferation. Additionally, the encoded protein may promote the progression of cancers of various human tissues. [provided by RefSeq, Jul 2015]
UniProt Comments for EREG	Epiregulin: Ligand of the EGF receptor/EGFR and ERBB4. May be a mediator of localized cell proliferation. As a mitogen it may stimulate cell proliferation and/or angiogenesis. Protein type: Membrane protein, integral Chromosomal Location of Human Ortholog: 4q13.3 Cellular Component: extracellular space; integral to plasma membrane; extracellular region Molecular Function: protein binding; growth factor activity; epidermal growth factor receptor binding Biological Process: response to peptide hormone stimulus; wound healing; nerve growth factor receptor signaling pathway; activation of MAPK activity; positive regulation of interleukin-6 biosynthetic process; positive regulation of smooth muscle cell proliferation; female meiosis; negative regulation of smooth muscle cell differentiation; negative regulation of cell proliferation; primary follicle stage, oogenesis; positive regulation of fibroblast proliferation; positive regulation of epidermal growth factor receptor activity; cell-cell signaling; positive regulation of cell proliferation; positive regulation of innate immune response; ovarian cumulus expansion; angiogenesis; negative regulation of epithelial cell proliferation; positive regulation of cytokine production; epidermal growth factor receptor signaling pathway; anatomical structure morphogenesis; phosphoinositide-mediated signaling; fibroblast growth factor receptor signaling pathway; positive regulation of mitosis; cytokine and chemokine mediated signaling pathway; positive regulation of cytokine biosynthetic process; keratinocyte proliferation; luteinizing hormone signaling pathway; oocyte maturation; keratinocyte differentiation; ovulation; organ morphogenesis; positive regulation of protein kinase activity; mRNA transcription; innate immune response; negative regulation of transcription, DNA-dependent; positive regulation of DNA replication; positive regulation of phosphorylation
Research Articles on EREG	**1.** Data indicate that the effects of epiregulin (EREG) and V-ATPase (TCIRG1) single nucleotide polymorphism (SNP) on pulmonary tuberculosis susceptibility, to the extent that they exist, are dependent on gene-gene interactions in West African populations.

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