BMPR1A siRNA – Bone Morphogenetic Protein Receptor Type-1a (Human)

PRODUCT OVERVIEW

Product Name	BMPR1A, siRNA
Full Product Name	BMPR1A siRNA (Human)
Product Gene Name	BMPR1A sirna
Product Synonym Names	ACVRLK3; ALK3; Bone morphogenetic protein receptor type-1A; BMP type-1A receptor; BMPR-1A; Activin receptor-like kinase 3; ALK-3; Serine/threonine-protein kinase receptor R5; SKR5; CD antigen CD292
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	BMPR1A 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	60,198 Da
OMIM	174900
3D Structure	ModBase 3D Structure for P36894
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 BMPR1A 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 BMPR1A sirna	RNA Interference (RNAi)
Related Product Information for BMPR1A sirna	MBS8216639 is an siRNA targeting BMPR1A. Also known as BMPR1A siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit BMPR1A expression using RNA interference
Other Notes	Small volumes of BMPR1A 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 BMPR1A. It may not necessarily be applicable to this product.

NCBI GI #	41349437
NCBI GeneID	657
NCBI Accession #	NP_004320.2
UniProt Primary Accession #	P36894
UniProt Secondary Accession #	Q8NEN8; A8K6U9
UniProt Related Accession #	P36894
GenBank Nucleotide #	NM_004329.2
NCBI Official Full Name	bone morphogenetic protein receptor type-1A
NCBI Official Synonym Full Names	bone morphogenetic protein receptor, type IA
NCBI Official Symbol	BMPR1A
NCBI Official Synonym Symbols	ALK3; SKR5; CD292; ACVRLK3; 10q23del
UniProt Protein Name	Bone morphogenetic protein receptor type-1A
UniProt Synonym Protein Names	Activin receptor-like kinase 3; ALK-3; Serine/threonine-protein kinase receptor R5; SKR5; CD_antigen: CD292
Protein Family	Bone morphogenetic protein receptor
UniProt Gene Name	BMPR1A
UniProt Synonym Gene Names	ACVRLK3; ALK3; BMP type-1A receptor; BMPR-1A; ALK-3; SKR5
UniProt Entry Name	BMR1A_HUMAN
NCBI Protein Information	bone morphogenetic protein receptor type-1A
NCBI Summary for BMPR1A	The bone morphogenetic protein (BMP) receptors are a family of transmembrane serine/threonine kinases that include the type I receptors BMPR1A and BMPR1B and the type II receptor BMPR2. These receptors are also closely related to the activin receptors, ACVR1 and ACVR2. The ligands of these receptors are members of the TGF-beta superfamily. TGF-betas and activins transduce their signals through the formation of heteromeric complexes with 2 different types of serine (threonine) kinase receptors: type I receptors of about 50-55 kD and type II receptors of about 70-80 kD. Type II receptors bind ligands in the absence of type I receptors, but they require their respective type I receptors for signaling, whereas type I receptors require their respective type II receptors for ligand binding. [provided by RefSeq, Jul 2008]

UniProt Comments for BMPR1A	BMPR1A: a serine/threonine-protein kinase receptor for Bone morphogenetic protein-2 and -4 (BMP-2 and BMP-4). Defects in BMPR1A are a cause of juvenile polyposis syndrome (JPS) and Cowden disease (CD), a cancer syndrome characterized by multiple hamartomas and by a high risk for breast, thyroid and endometriel cancers. Protein type: Kinase, protein; Protein kinase, Ser/Thr (receptor); Membrane protein, integral; Protein kinase, TKL; EC 2.7.11.30; TKL group; STKR family; Type1 subfamily Chromosomal Location of Human Ortholog: 10q22.3 Cellular Component: cell soma; dendrite; plasma membrane; integral to membrane; caveola Molecular Function: transforming growth factor beta receptor activity; protein serine/threonine kinase activity; protein binding; protein homodimerization activity; metal ion binding; SMAD binding; transmembrane receptor protein serine/threonine kinase activity; ATP binding; receptor signaling protein serine/threonine kinase activity Biological Process: neural plate mediolateral pattern formation; transcription from RNA polymerase II promoter; developmental growth; hindlimb morphogenesis; neural crest cell development; positive regulation of transcription, DNA-dependent; mesendoderm development; paraxial mesoderm structural organization; dorsal/ventral axis specification; palate development; protein amino acid phosphorylation; negative regulation of neurogenesis; BMP signaling pathway; transforming growth factor beta receptor signaling pathway; positive regulation of mesenchymal cell proliferation; ectoderm development; Mullerian duct regression; somitogenesis; in utero embryonic development; lateral mesoderm development; stem cell maintenance; positive regulation of bone mineralization; odontogenesis of dentine-containing teeth; positive regulation of osteoblast differentiation; mesoderm formation; pituitary gland development; cartilage development; embryonic organ development; immune response; embryonic digit morphogenesis; regulation of lateral mesodermal cell fate specification; positive regulation of epithelial cell proliferation; lung development Disease: Juvenile Polyposis Syndrome; Polyposis Syndrome, Hereditary Mixed, 2
Research Articles on BMPR1A	**1.** Results support a novel role for miR-885-3p in tumor angiogenesis by targeting BMPR1A, which regulates a proangiogenic factor.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/human-sirna/bmpr1a/8216639