AHR siRNA – Receptor (Rat)

PRODUCT OVERVIEW

Product Name	AHR, siRNA
Full Product Name	AHR siRNA (Rat)
Product Gene Name	AHR sirna
Product Synonym Names	Aryl hydrocarbon receptor; Ah receptor; AhR
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	AHR 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	69,332 Da
3D Structure	ModBase 3D Structure for P41738
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 AHR 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 AHR sirna	RNA Interference (RNAi)
Related Product Information for AHR sirna	MBS8204281 is an siRNA targeting AHR. Also known as AHR siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit AHR expression using RNA interference
Other Notes	Small volumes of AHR 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 AHR. It may not necessarily be applicable to this product.

NCBI GI #	29337195
NCBI GeneID	25690

NCBI Accession #	P41738.2
UniProt Primary Accession #	P41738
UniProt Secondary Accession #	O88930; O89105
UniProt Related Accession #	P41738
NCBI Official Full Name	Aryl hydrocarbon receptor
NCBI Official Synonym Full Names	aryl hydrocarbon receptor
NCBI Official Symbol	Ahr
UniProt Protein Name	Aryl hydrocarbon receptor
Protein Family	Aldehyde reductase
UniProt Gene Name	Ahr
UniProt Synonym Gene Names	Ah receptor; AhR
UniProt Entry Name	AHR_RAT
NCBI Protein Information	aryl hydrocarbon receptor
NCBI Summary for AHR	binds 3-methylcholanthrene and other aromatic hydrocarbons; may play a role in bone formation [RGD, Feb 2006]
UniProt Comments for AHR	AHR: a nuclear receptor for aryl hydrocarbons involved in xenobiotic metabolism, cell cycle regulation, and development in response to both endogenous and environmental signals. AhR was initially identified as a receptor for dioxins, which are environmental pollutants generated by waste incineration and other industrial processes . AhR ligands include polycyclic aromatic hydrocarbons, including the carcinogen benzo(a)pyrene and other components of cigarette smoke. Naturally occurring AhR ligands include flavonoids, which are aromatic plant secondary compounds commonly found in vegetables and fruits. Cytoplasmic aryl hydrocarbon receptors are found in protein complexes with heat shock proteins. Upon ligand binding, AhR dissociates from heat shock proteins and translocate to the nucleus where it dimerizes with AhR nuclear translocator (ARNT, HIF-1b). The AhR/ARNT heterodimer binds to nuclear xenobiotic response elements to control the expression of genes associated with xenobiotic metabolism, including several cytochrome P450 genes. AhR is ubiquitously expressed and is thought to play a role in regulation of cell proliferation and differentiation, cytokine expression, and xenobiotic metabolism. Research studies link AhR activity with the control of regulatory T-cell and T-helper 17 cell differentiation, regulation of the inflammatory response, and the onset of lung cancer. Protein type: DNA-binding; Nuclear receptor; Transcription factor Cellular Component: nucleoplasm; cytoplasm; cytosol; nucleus Molecular Function: RNA polymerase II transcription factor activity, enhancer binding; protein dimerization activity; signal transducer activity; protein binding; ligand-dependent nuclear receptor activity; DNA binding; protein heterodimerization activity; sequence-specific DNA binding; Hsp90 protein binding; aryl hydrocarbon receptor activity; transcription factor binding; transcription factor activity Biological Process: transcription from RNA polymerase II promoter; prostate gland development; gland development; positive regulation of cell size; apoptosis; blood circulation; response to toxin; positive regulation of transcription, DNA-dependent; cell morphogenesis; negative regulation of transcription from RNA polymerase II promoter; response to organic cyclic substance; response to estradiol stimulus; smooth muscle development; ovarian follicle development; regulation of transcription, DNA-dependent; B cell homeostasis; post-embryonic hemopoiesis; T cell homeostasis; regulation of B cell proliferation; circadian regulation of gene expression; regulation of blood vessel size; positive regulation of transcriptional preinitiation complex assembly; positive regulation of growth; spleen development; blood vessel development; camera-type eye development; intracellular receptor-mediated signaling pathway; immune system process; embryonic hemopoiesis; negative regulation of systemic arterial blood pressure; liver development; negative regulation of vasoconstriction; regulation of transcription from RNA polymerase II promoter; patterning of blood vessels; response to xenobiotic stimulus; regulation of gene expression; blood vessel morphogenesis; positive regulation of transcription from RNA polymerase II promoter; blood vessel remodeling; negative regulation of transcription, DNA-dependent; reproductive structure development; lymphocyte homeostasis

Research Articles on AHR	**1.** The aryl hydrocarbon receptor-dependent disruption of contact inhibition in rat liver WB-F344 epithelial cells is linked with induction of survivin, but not with inhibition of apoptosis.
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/rat-sirna/ahr/8204281