CITED2 siRNA – Cbp/P300-Interacting Transactivator 2 (Mouse)

PRODUCT OVERVIEW

Product Name	CITED2, siRNA
Full Product Name	CITED2 siRNA (Mouse)
Product Gene Name	CITED2 sirna
Product Synonym Names	MRG1; MSG2; Cbp/p300-interacting transactivator 2; MSG-related protein 1; MRG-1; P35srj
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	CITED2 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	27,247 Da
3D Structure	ModBase 3D Structure for O35740
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 CITED2 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 CITED2 sirna	RNA Interference (RNAi)
Related Product Information for CITED2 sirna	MBS8218533 is an siRNA targeting CITED2. Also known as CITED2 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit CITED2 expression using RNA interference
Other Notes	Small volumes of CITED2 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 CITED2. It may not necessarily be applicable to this product.

NCBI GI #	70887541

NCBI GeneID	17684
NCBI Accession #	NP_034958.2
UniProt Primary Accession #	O35740
UniProt Secondary Accession #	O35741; O35742; O35743; O55198; Q6PGA9
UniProt Related Accession #	O35740
GenBank Nucleotide #	NM_010828.3
NCBI Official Full Name	cbp/p300-interacting transactivator 2
NCBI Official Synonym Full Names	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2
NCBI Official Symbol	Cited2
NCBI Official Synonym Symbols	Mrg1; Msg2; p35srj; AI835299; ER154-like
UniProt Protein Name	Cbp/p300-interacting transactivator 2
UniProt Synonym Protein Names	MSG-related protein 1; MRG-1; P35srj
Protein Family	Cbp/p300-interacting transactivator
UniProt Gene Name	Cited2
UniProt Synonym Gene Names	Mrg1; Msg2; MRG-1
UniProt Entry Name	CITE2_MOUSE
NCBI Protein Information	cbp/p300-interacting transactivator 2

UniProt Comments for CITED2	CITED2: Transcriptional coactivator of the p300/CBP-mediated trancription complex. Acts as a bridge, linking TFAP2 transcription factors and the p300/CBP transcriptional coactivator complex in order to stimulate TFAP2-mediated transcriptional activation. Positively regulates TGF-beta signaling through its association with the SMAD/p300/CBP-mediated transcriptional coactivator complex. Stimulates the peroxisome proliferator- activated receptors PPARA transcriptional activity. Enhances estrogen-dependent transactivation mediated by estrogen receptors. Acts also as a transcriptional corepressor; interferes with the binding of the transcription factors HIF1A or STAT2 and the p300/CBP transcriptional coactivator complex. Participates in sex determination and early gonad development by stimulating transcription activation of SRY. Plays a role in controlling left- right patterning during embryogenesis; potentiates transcriptional activation of NODAL-mediated gene transcription in the left lateral plate mesoderm (LPM). Plays an essential role in differentiation of the adrenal cortex from the adrenogonadal primordium (AGP); stimulates WT1-mediated transcription activation thereby up-regulating the nuclear hormone receptor NR5A1 promoter activity. Associates with chromatin to the PITX2 P1 promoter region. Defects in CITED2 are a cause of ventricular septal defect type 2 (VSD2). VSD2 is a common form of congenital cardiovascular anomaly that may occur alone or in combination with other cardiac malformations. It can affect any portion of the ventricular septum, resulting in abnormal communications between the two lower chambers of the heart. Classification is based on location of the communication, such as perimembranous, inlet, outlet (infundibular), central muscular, marginal muscular, or apical muscular defect. Large defects that go unrepaired may give rise to cardiac enlargement, congestive heart failure, pulmonary hypertension, Eisenmenger's syndrome, delayed fetal brain development, arrhythmias, and even sudden cardiac death. Defects in CITED2 are a cause of atrial septal defect type 8 (ASD8). ASD8 is a congenital heart malformation characterized by incomplete closure of the wall between the atria resulting in blood flow from the left to the right atria. Belongs to the CITED family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Nuclear receptor co-regulator; Apoptosis; Transcription, coactivator/corepressor; Cell cycle regulation; Motility/polarity/chemotaxis Cellular Component: cytoplasm; nuclear chromatin; nucleus Molecular Function: histone acetyltransferase binding; protein binding; transcription coactivator activity; LBD domain binding; transcription cofactor activity; chromatin binding; SMAD binding; transcription factor activity; transcription corepressor activity Biological Process: transcription from RNA polymerase II promoter; erythrocyte development; embryonic placenta development; central nervous system development; multicellular organismal development; positive regulation of transcription, DNA-dependent; heart development; negative regulation of transcription from RNA polymerase II promoter; decidualization; regulation of transcription, DNA-dependent; vasculature development; cranial nerve morphogenesis; transforming growth factor beta receptor signaling pathway; positive regulation of cell-cell adhesion; morphogenesis of an epithelium; heart looping; cell differentiation; vasculogenesis; kidney development; negative regulation of cell migration; spleen development; blood vessel development; granulocyte differentiation; transcription, DNA-dependent; thymus development; adrenal gland development; in utero embryonic development; leukocyte differentiation; embryonic process involved in female pregnancy; male gonad development; positive regulation of transforming growth factor beta receptor signaling pathway; positive regulation of cell cycle; liver development; trophectodermal cell differentiation; peripheral nervous system development; regulation of transcription from RNA polymerase II promoter; sex determination; cell proliferation; response to estrogen stimulus; ureteric bud branching; neural tube closure; response to hypoxia; hemopoietic progenitor cell differentiation; positive regulation of transcription from RNA polymerase II promoter; lens morphogenesis in camera-type eye; embryonic camera-type eye morphogenesis; determination of left/right symmetry; negative regulation of transcription, DNA-dependent; neural tube formation; negative regulation of apoptosis
Research Articles on CITED2	**1.** Cited2 is required for the maintenance of adult hematopoietic stem cell glycolytic metabolism likely through regulating Pdk2, Pdk4, lactate dehydrogenases B and D, and Akt activity.
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