CD86 siRNA – T-Lymphocyte Activation Antigen CD86 Isoform 4 (Human)

PRODUCT OVERVIEW

Product Name	CD86, siRNA
Full Product Name	CD86 siRNA (Human)
Product Gene Name	CD86 sirna
Product Synonym Names	CD28LG2; T-lymphocyte activation antigen CD86; Activation B7-2 antigen; B70; BU63; CTLA-4 counter-receptor B7.2; FUN-1; CD antigen CD86
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	CD86 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	28,420 Da
OMIM	601020
3D Structure	ModBase 3D Structure for P42081
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 CD86 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 CD86 sirna	RNA Interference (RNAi)
Related Product Information for CD86 sirna	MBS8211054 is an siRNA targeting CD86. Also known as CD86 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit CD86 expression using RNA interference
Other Notes	Small volumes of CD86 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 CD86. It may not necessarily be applicable to this product.

NCBI GI #	332634950
NCBI GeneID	942
NCBI Accession #	NP_001193853.1
UniProt Primary Accession #	P42081
UniProt Secondary Accession #	Q13655; Q6FHB1; Q6GTS4; Q7M4L5; A0N0P0; B7Z2F3; B7Z702; E7ETN5; E9PC27
UniProt Related Accession #	P42081
GenBank Nucleotide #	NM_001206924.1
NCBI Official Full Name	T-lymphocyte activation antigen CD86 isoform 4
NCBI Official Synonym Full Names	CD86 molecule
NCBI Official Symbol	CD86
NCBI Official Synonym Symbols	B70; B7-2; B7.2; LAB72; CD28LG2
UniProt Protein Name	T-lymphocyte activation antigen CD86
UniProt Synonym Protein Names	Activation B7-2 antigen; B70; BU63; CTLA-4 counter-receptor B7.2; FUN-1; CD_antigen: CD86
Protein Family	T-lymphocyte activation antigen
UniProt Gene Name	CD86
UniProt Synonym Gene Names	CD28LG2
UniProt Entry Name	CD86_HUMAN
NCBI Protein Information	T-lymphocyte activation antigen CD86
NCBI Summary for CD86	This gene encodes a type I membrane protein that is a member of the immunoglobulin superfamily. This protein is expressed by antigen-presenting cells, and it is the ligand for two proteins at the cell surface of T cells, CD28 antigen and cytotoxic T-lymphocyte-associated protein 4. Binding of this protein with CD28 antigen is a costimulatory signal for activation of the T-cell. Binding of this protein with cytotoxic T-lymphocyte-associated protein 4 negatively regulates T-cell activation and diminishes the immune response. Alternative splicing results in several transcript variants encoding different isoforms.[provided by RefSeq, May 2011]
UniProt Comments for CD86	CD86: Receptor involved in the costimulatory signal essential for T-lymphocyte proliferation and interleukin-2 production, by binding CD28 or CTLA-4. May play a critical role in the early events of T-cell activation and costimulation of naive T-cells, such as deciding between immunity and anergy that is made by T- cells within 24 hours after activation. Isoform 2 interferes with the formation of CD86 clusters, and thus acts as a negative regulator of T-cell activation. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Immunoglobulin superfamily; Membrane protein, integral Chromosomal Location of Human Ortholog: 3q21 Cellular Component: cell surface; intracellular membrane-bound organelle; integral to membrane; plasma membrane; external side of plasma membrane Molecular Function: protein binding; coreceptor activity; receptor activity; receptor binding Biological Process: positive regulation of lymphotoxin A biosynthetic process; viral reproduction; negative regulation of T cell anergy; T cell activation; nerve growth factor receptor signaling pathway; positive regulation of interleukin-2 biosynthetic process; positive regulation of transcription, DNA-dependent; myeloid dendritic cell differentiation; positive regulation of activated T cell proliferation; positive regulation of interleukin-4 biosynthetic process; positive regulation of T-helper 2 cell differentiation; cell-cell signaling; T cell proliferation during immune response; positive regulation of cell proliferation; response to yeast; defense response to virus; aging; epidermal growth factor receptor signaling pathway; response to drug; fibroblast growth factor receptor signaling pathway; phosphoinositide-mediated signaling; B cell activation; T cell costimulation; toll-like receptor signaling pathway; innate immune response; immune response

Research Articles on CD86	**1.** CD86 polymorphisms are associated with susceptibility to pneumonia-induced sepsis and may affect gene expression in monocytes.
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