NFKBIA siRNA – Nf-Kappa-B Inhibitor Alpha (Human)

PRODUCT OVERVIEW

Product Name	NFKBIA, siRNA
Full Product Name	NFKBIA siRNA (Human)
Product Gene Name	NFKBIA sirna
Product Synonym Names	IKBA; MAD3; NFKBI; NF-kappa-B inhibitor alpha; I-kappa-B-alpha; IkB-alpha; IkappaBalpha; Major histocompatibility complex enhancer-binding protein MAD3
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	NFKBIA 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	35,609 Da
OMIM	164008
3D Structure	ModBase 3D Structure for P25963
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 NFKBIA 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 NFKBIA sirna	RNA Interference (RNAi)
Related Product Information for NFKBIA sirna	MBS8228364 is an siRNA targeting NFKBIA. Also known as NFKBIA siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit NFKBIA expression using RNA interference
Other Notes	Small volumes of NFKBIA 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 NFKBIA. It may not necessarily be applicable to this product.

NCBI GI #	10092619
NCBI GeneID	4792
NCBI Accession #	NP_065390.1
UniProt Primary Accession #	P25963
UniProt Secondary Accession #	B2R8L6
UniProt Related Accession #	P25963
GenBank Nucleotide #	NM_020529.2
NCBI Official Full Name	NF-kappa-B inhibitor alpha
NCBI Official Synonym Full Names	nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha
NCBI Official Symbol	NFKBIA
NCBI Official Synonym Symbols	IKBA; MAD-3; NFKBI
UniProt Protein Name	NF-kappa-B inhibitor alpha
UniProt Synonym Protein Names	I-kappa-B-alpha; IkB-alpha; IkappaBalpha; Major histocompatibility complex enhancer-binding protein MAD3
Protein Family	NF-kappa-B inhibitor
UniProt Gene Name	NFKBIA
UniProt Synonym Gene Names	IKBA; MAD3; NFKBI; IkB-alpha; IkappaBalpha
UniProt Entry Name	IKBA_HUMAN
NCBI Protein Information	NF-kappa-B inhibitor alpha
NCBI Summary for NFKBIA	This gene encodes a member of the NF-kappa-B inhibitor family, which contain multiple ankrin repeat domains. The encoded protein interacts with REL dimers to inhibit NF-kappa-B/REL complexes which are involved in inflammatory responses. The encoded protein moves between the cytoplasm and the nucleus via a nuclear localization signal and CRM1-mediated nuclear export. Mutations in this gene have been found in ectodermal dysplasia anhidrotic with T-cell immunodeficiency autosomal dominant disease. [provided by RefSeq, Aug 2011]

UniProt Comments for NFKBIA	IkB-alpha: a regulatory protein that inhibits NF-kappa-B by complexing with and trapping it in the cytoplasm. May be involved in regulation of transcriptional responses to NF-kappa-B, including cell adhesion, immune and proinflammatory responses, apoptosis, differentiation and growth. Controlled by sequential serine-phosphorylation, ubiquitination and degradation. Protein type: DNA-binding; Inhibitor Chromosomal Location of Human Ortholog: 14q13 Cellular Component: cytoplasm; plasma membrane; nucleus; cytosol Molecular Function: identical protein binding; NF-kappaB binding; protein binding; enzyme binding; ubiquitin protein ligase binding; heat shock protein binding; nuclear localization sequence binding; protein complex binding; transcription factor binding Biological Process: nerve growth factor receptor signaling pathway; viral reproduction; apoptosis; positive regulation of cellular protein metabolic process; toll-like receptor 3 signaling pathway; T cell receptor signaling pathway; toll-like receptor 10 signaling pathway; activation of NF-kappaB transcription factor; toll-like receptor 5 signaling pathway; response to exogenous dsRNA; cytoplasmic sequestering of NF-kappaB; lipopolysaccharide-mediated signaling pathway; positive regulation of interferon type I production; toll-like receptor 4 signaling pathway; cytoplasmic sequestering of transcription factor; negative regulation of myeloid cell differentiation; MyD88-independent toll-like receptor signaling pathway; regulation of NF-kappaB import into nucleus; negative regulation of DNA binding; toll-like receptor 2 signaling pathway; regulation of cell proliferation; MyD88-dependent toll-like receptor signaling pathway; response to muramyl dipeptide; protein import into nucleus, translocation; inhibition of NF-kappaB transcription factor; toll-like receptor signaling pathway; innate immune response; negative regulation of Notch signaling pathway; positive regulation of transcription from RNA polymerase II promoter; toll-like receptor 9 signaling pathway; negative regulation of apoptosis Disease: Ectodermal Dysplasia, Anhidrotic, With T-cell Immunodeficiency, Autosomal Dominant
Research Articles on NFKBIA	**1.** IkappaBetaalpha inhibits apoptosis at the outer mitochondrial membrane independently of NF-kappaB retention.
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