Forkhead Box Protein P3 (FOXP3) Mouse Recombinant Protein

PRODUCT OVERVIEW

Product Name	Forkhead box protein P3 (Foxp3), Recombinant Protein
Full Product Name	Recombinant Mouse Forkhead box protein P3 (Foxp3)
Product Gene Name	Foxp3 recombinant protein
Product Synonym Gene Name	Foxp3
Sequence	MPNPRPAKPM APSLALGPSP GVLPSWKTAP KGSELLGTRG SGGPFQGRDL RSGAHTSSSL NPLPPSQLQL PTVPLVMVAP SGARLGPSPH LQALLQDRPH FMHQLSTVDA HAQTPVLQVR PLDNPAMISL PPPSAATGVF SLKARPGLPP GINVASLEWV SREPALLCTF PRSGTPRKDS NLLAAPQGSY PLLANGVCKW PGCEKVFEEP EEFLKHCQAD HLLDEKGKAQ CLLQREVVQS LEQQLELEKE KLGAMQAHLA GKMALAKAPS VASMDKSSCC IVATSTQGSV LPAWSAPREA PDGGLFAVRR HLWGSHGNSS FPEFFHNMDY FKYHNMRPPF TYATLIRWAI LEAPERQRTL NEIYHWFTRM FAYFRNHPAT WKNAIRHNLS LHKCFVRVES EKGAVWTVDE FEFRKKR
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	47,346 Da
Sequence Positions	1-417aa; Full Length of Mature Protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q99JB6
Species	Mouse
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Foxp3 recombinant protein	This protein is a member of the forkhead winged-helix family of transcriptional regulators. Defects in this gene are the cause of immunodeficiency polyendocrinopathy, enteropathy, X-linked syndrome (IPEX), also known as X-linked autoimmunity-immunodeficiency syndrome. Alternatively spliced transcript variants encoding different isoforms have been identified.
Other Notes	Small volumes of Foxp3 recombinant protein 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.
Searchable Terms for Foxp3 purchase	MBS1372821 is a recombinant protein targeting Foxp3. Also known as Recombinant Mouse Forkhead box protein P3 (Foxp3). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Foxp3. It may not necessarily be applicable to this product.

NCBI GI #	313569800

NCBI GeneID	20371
NCBI Accession #	NP_001186276.1
UniProt Primary Accession #	Q99JB6
UniProt Related Accession #	Q99JB6
GenBank Nucleotide #	NM_001199347.1
NCBI Official Full Name	forkhead box protein P3
NCBI Official Synonym Full Names	forkhead box P3
NCBI Official Symbol	Foxp3
NCBI Official Synonym Symbols	sf; JM2; scurfin
UniProt Protein Name	Forkhead box protein P3
UniProt Synonym Protein Names	Scurfin
Protein Family	Forkhead box protein
UniProt Gene Name	Foxp3
NCBI Protein Information	forkhead box protein P3
NCBI Summary for Foxp3	The protein encoded by this gene is a member of the forkhead/winged-helix family of transcriptional regulators. Defects in this gene result in the scurfy phenotype (sf). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2015]
UniProt Comments for Foxp3	Transcriptional regulator which is crucial for the development and inhibitory function of regulatory T-cells (Treg). Plays an essential role in maintaining homeostasis of the immune system by allowing the acquisition of full suppressive function and stability of the Treg lineage, and by directly modulating the expansion and function of conventional T-cells. Can act either as a transcriptional repressor or a transcriptional activator depending on its interactions with other transcription factors, histone acetylases and deacetylases. The suppressive activity of Treg involves the coordinate activation of many genes, including CTLA4 and TNFRSF18 by FOXP3 along with repression of genes encoding cytokines such as interleukin-2 (IL2) and interferon-gamma (IFNG). Inhibits cytokine production and T-cell effector function by repressing the activity of two key transcription factors, RELA and NFATC2 (PubMed:15790681). Mediates transcriptional repression of IL2 via its association with histone acetylase KAT5 and histone deacetylase HDAC7 (). Can activate the expression of TNFRSF18, IL2RA and CTLA4 and repress the expression of IL2 and IFNG via its association with transcription factor RUNX1 (PubMed:17377532). Inhibits the differentiation of IL17 producing helper T-cells (Th17) by antagonizing RORC function, leading to down-regulation of IL17 expression, favoring Treg development (PubMed:18368049). Inhibits the transcriptional activator activity of RORA (). Can repress the expression of IL2 and IFNG via its association with transcription factor IKZF4 (PubMed:19696312).
Research Articles on Foxp3	**1.** Data suggest that genetic or environmental factors that even moderately affect the expression of both PD-1 and FoxP3 can cause life-threatening autoimmune diseases by disrupting the T-cell homeostasis.
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