Tubulin Alpha-1a Chain (TUBA1A) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Tubulin alpha-1A chain (TUBA1A), Recombinant Protein
Full Product Name	Recombinant Human Tubulin alpha-1A chain (TUBA1A)
Product Gene Name	TUBA1A recombinant protein
Product Synonym Gene Name	TUBA1A
Sequence	MRECISIHVG QAGVQIGNAC WELYCLEHGI QPDGQMPSDK TIGGGDDSFN TFFSETGAGK HVPRAVFVDL EPTVIDEVRT GTYRQLFHPE QLITGKEDAA NNYARGHYTI GKEIIDLVLD RIRKLADQCT GLQGFLVFHS FGGGTGSGFT SLLMERLSVD YGKKSKLEFS IYPAPQVSTA VVEPYNSILT THTTLEHSDC AFMVDNEAIY DICRRNLDIE RPTYTNLNRL IGQIVSSITA SLRFDGALNV DLTEFQTNLV PYPRIHFPLA TYAPVISAEK AYHEQLSVAE ITNACFEPAN QMVKCDPRHG KYMACCLLYR GDVVPKDVNA AIATIKTKRT IQFVDWCPTG FKVGINYQPP TVVPGGDLAK VQRAVCMLSN TTAIAEAWAR LDHKFDLMYA KRAFVHWYVG EGMEEGEFSE AREDMAALEK DYEEVGVDSV EGEGEEEGEE Y
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	46,297 Da
Sequence Positions	1-451, Full length 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.
OMIM	602529
3D Structure	ModBase 3D Structure for Q71U36
Species	Human
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for TUBA1A recombinant protein	Microtubules of the eukaryotic cytoskeleton perform essential and diverse functions and are composed of a heterodimer of alpha and beta tubulins. The genes encoding these microtubule constituents belong to the tubulin superfamily, which is composed of six distinct families. Genes from the alpha, beta and gamma tubulin families are found in all eukaryotes. The alpha and beta tubulins represent the major components of microtubules, while gamma tubulin plays a critical role in the nucleation of microtubule assembly. There are multiple alpha and beta tubulin genes, which are highly conserved among species. This gene encodes alpha tubulin and is highly similar to mouse and rat Tuba1 gene. Northern blotting studies have shown that the gene expression is predominantly found in morphologically differentiated neurologic cells. This gene is one of three alpha-tubulin genes in a cluster on chromosome 12q.
Other Notes	Small volumes of TUBA1A 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 TUBA1A purchase	MBS1314270 is a recombinant protein targeting TUBA1A. Also known as Recombinant Human Tubulin alpha-1A chain (TUBA1A). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TUBA1A. It may not necessarily be applicable to this product.

NCBI GI #	393715091
NCBI GeneID	7846
NCBI Accession #	NP_001257328.1
UniProt Primary Accession #	Q71U36
UniProt Secondary Accession #	P04687; P05209; A8K0B8; G3V1U9
UniProt Related Accession #	Q71U36
GenBank Nucleotide #	NM_001270399.1
NCBI Official Full Name	tubulin alpha-1A chain isoform 1
NCBI Official Synonym Full Names	tubulin alpha 1a
NCBI Official Symbol	TUBA1A
NCBI Official Synonym Symbols	LIS3; TUBA3; B-ALPHA-1
UniProt Protein Name	Tubulin alpha-1A chain
UniProt Synonym Protein Names	Alpha-tubulin 3; Tubulin B-alpha-1; Tubulin alpha-3 chain
UniProt Gene Name	TUBA1A
UniProt Synonym Gene Names	TUBA3
NCBI Protein Information	tubulin alpha-1A chain
NCBI Summary for TUBA1A	Microtubules of the eukaryotic cytoskeleton perform essential and diverse functions and are composed of a heterodimer of alpha and beta tubulins. The genes encoding these microtubule constituents belong to the tubulin superfamily, which is composed of six distinct families. Genes from the alpha, beta and gamma tubulin families are found in all eukaryotes. The alpha and beta tubulins represent the major components of microtubules, while gamma tubulin plays a critical role in the nucleation of microtubule assembly. There are multiple alpha and beta tubulin genes, which are highly conserved among species. This gene encodes alpha tubulin and is highly similar to the mouse and rat Tuba1 genes. Northern blot studies have shown that the gene expression is predominantly found in morphologically differentiated neurologic cells. This gene is one of three alpha-tubulin genes in a cluster on chromosome 12q. Mutations in this gene cause lissencephaly type 3 (LIS3) - a neurological condition characterized by microcephaly, intellectual disability, and early-onset epilepsy caused by defective neuronal migration. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2017]
UniProt Comments for TUBA1A	Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha chain.
Research Articles on TUBA1A	**1.** Molecular docking studies revealed that 6f interacted and bound ef fi ciently with the colchicine-binding site of tubulin. In addition, 6f treatment induced G2/M cell cycle arrest dose-dependently and subsequently induced cell apoptosis
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