TUBA1A cDNA Clone – Tubulin, Alpha 1a (Human)

PRODUCT OVERVIEW

Product Name	TUBA1A, cDNA Clone
Full Product Name	TUBA1A cDNA Clone
Product Gene Name	TUBA1A cdna clone
Sequence	atgcgtgagt gcatctccat ccacgttggc caggctggtg tccagattgg caatgcctgc tgggagctct actgcctgga acacggcatc cagcccgatg gccagatgcc aagtgacaag accattgggg gaggagatga ttccttcaac accttcttca gtgagacggg ggctggcaag catgtgcccc gggcagtgtt tgtagacttg gaacccacag tcattgatga agttcgcact ggcacctacc gccagctctt ccaccctgag caacttatca caggcaaaga agatgctgcc aataactatg cccgagggca ctacaccatt ggcaaggaga tcattgacct cgtgttggac cgaattcgca agctggccga ccagtgcacg ggtctccagg gcttcttggt tttccacagc tttggtgggg gaactggttc tgggttcacc tcgctgctca tggaacgtct ctcagttgat tatggcaaga agtccaagct ggagttctct atttacccgg cgccccaggt ttccacagct gtagttgagc cctacaactc catcctcacc acccacacca ccctggagca ctctgattgt gccttcatgg tagacaatga ggccatctat gacatctgtc gtagaaacct cgatattgag cgtccaacct atactaacct gaataggtta ataggtcaaa ttgtgtcctc catcactgct tccctgagat ttgatggagc cctgaatgtt gacctgacag aattccagac caacctggtg ccctatcccc gcatccactt ccctctggcc acatatgccc ctgtcatctc tgctgagaaa gcctaccatg aacagctttc tgtagcagag atcaccaatg cttgctttga gccagccaac cagatggtga aatgtgaccc tcgccatggt aaatacatgg cttgctgcct gttgtaccgt ggtgacgtgg ttcccaaaga tgtcaatgct gccattgcca ccatcaagac caagcgtacc atccagtttg tggattggtg ccccactggc ttcaaggttg gcatcaacta ccagcctccc actgtggtgc ctggtggaga cctggccaag gtacagagag ctgtgtgcat gctgagcaac accacagcca ttgctgaggc ctgggctcgc ctggaccaca agtttgacct gatgtatgcc aaacgtgcct ttgttcactg gtacgttggg gaggggatgg aggaaggtga gttttcagag gcccgtgagg acatggctgc ccttgagaag gattatgagg aggttggtgt ggattctgtt gaaggagagg gtgaggaaga aggagaggaa tactaa
Molecular Weight	46,297 Da
OMIM	602529
Vector	pENTR223.1 or pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for TUBA1A cdna clone	MBS1275975 is a cDNA clone targeting TUBA1A.
Other Notes	Small volumes of TUBA1A cdna clone 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 TUBA1A. It may not necessarily be applicable to this product.

NCBI GI #	13623682
NCBI GeneID	7846
NCBI Accession #	BC006468
UniProt Secondary Accession #	P04687; P05209; A8K0B8; G3V1U9
UniProt Related Accession #	Q71U36
NCBI Official Full Name	Homo sapiens tubulin, alpha 1a, mRNA
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
UniProt Entry Name	TBA1A_HUMAN
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 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. Mutations in this gene cause lissencephaly type 3 (LIS3) - a neurological condition characterized by microcephaly, mental retardation, and early-onset epilepsy and caused by defective neuronal migration. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2012]
UniProt Comments for TUBA1A	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. Dimer of alpha and beta chains. Expressed at a high level in fetal brain. Belongs to the tubulin family. Protein type: Motility/polarity/chemotaxis; Cytoskeletal Chromosomal Location of Human Ortholog: 12q13.12 Cellular Component: cytosol; microtubule; nucleus; recycling endosome Molecular Function: protein binding; structural molecule activity Biological Process: cell division; cytoskeleton-dependent intracellular transport; G2/M transition of mitotic cell cycle; microtubule-based process Disease: Lissencephaly 3
Research Articles on TUBA1A	**1.** Data show that tubulin phosphorylation and acetylation play important roles in the control of microtubule assembly and stability.
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