

Recombinant Human TUBA1A Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. TUBA1A-5777H Lot. No. (See product label)

SPECIFICATION

Product Overview TUBA1A MS Standard C13 and N15-labeled recombinant protein (NP_006000) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.

Species Human

Source HEK293

Description

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.

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Molecular Mass	50.1 kDa
AA Sequence	MRECISIHVGQAGVQIGNACWELYCLEHGIQPDGQMPSDKTIGGGDDSFNTFFSET GAGKHVPRAVFVDLEPTVIDEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEI IDLVLDRIRKLADQCTGLQGFLVFHSGGGTSGSFTSLLMERLSVDYGGKSKLEFSIY PAPQVSTAVVEPYNSILTTHTTLEHSDCAFMDNEAIYDICRRNLDIERPTYTNLNRLI GQIVSSITASLRFDGALNVDLTEFQTNLVPYPRIFPLATYAPVISA EKAYHEQLSVAEI TNACFEPANQMVKCDPRHGKYM ACCLLYRGDVV PKDVNAAIATIKTKRTIQFVDWC PTGFKVGINYQPPTVVPGGDLAKVQRAVCMLSNTTAIAEAWARLDHKFDLMYAKRA FVHWYVGEEMEEGEFSEAREDMAALEKDYE EVGVDSVEGEGEEEGEEYTRTRPLE QKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 µg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name	TUBA1A tubulin alpha 1a [Homo sapiens (human)]
Official Symbol	TUBA1A
Synonyms	TUBA1A; tubulin, alpha 1a; tubulin alpha-1A chain; B ALPHA 1; FLJ25113; TUBA3; tubulin; alpha; brain specific; hum-a-tub1; hum-a-tub2; alpha-tubulin 3; tubulin, alpha

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3; tubulin B-alpha-1; tubulin alpha-3 chain; tubulin, alpha, brain-specific; LIS3; B-ALPHA-1;

Gene ID 7846

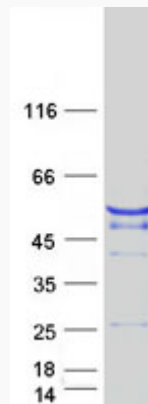
mRNA Refseq NM_006009

Protein Refseq NP_006000

MIM 602529

UniProt ID Q71U36

SDS-PAGE



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