

Recombinant Human TUBA1A protein, His-tagged

Cat. No. TUBA1A-3184H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human TUBA1A protein (1-451aa) was fused to His-tag and expressed in E.coli.
Species	Human
Source	E.coli
ProteinLength	1-451 a.a.
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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Form	The purified protein was Lyophilized from sterile PBS (58mM Na ₂ HPO ₄ , 17mM NaH ₂ PO ₄ , 68mM NaCl, pH7.). 5% trehalose and 5% mannitol are added as protectants before lyophilization.
Molecular Mass	56 kDa
AA Sequence	MRECISIHVGQAGVQIGNACWELCYLEHGIQPDGQMPSDKTIGGGDDSFNTFFSET GAGKHVPRAVFVDLEPTVIDEVRTGTYRQLFHPEQLITGKEDAANNYARGHYTIGKEI IDLVLDRIRKLADQCTGLQGFLVFHSGGGTGSGFTSLLMERLSVDYGGKSKLEFSIY PAPQVSTAVVEPYNSILTHTTLEHSDCAFMVDNEAIYDICRRNLDIERPTYTNLNRLI GQIVSSITASLRFDGALNVDLTFQTNLVPYPRIHFPLATYAPVISA EKAYHEQLSVAEI TNACFEPANQMVKCDPRHGKYM ACCLLYRGDVVPKDVNAAIATIKTKRTIQFVDWC PTGFKVGINYQPPTVVPGGDLAKVQRAVCMLSNTTAIAEAWARLDHKFDLMYAKRA FVHWYVGEGMEEGEFSEAREDMAALEKDYE EVGVDSVEGEGEEEGEEY
Purity	95%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Storage	Short-term storage: Store at 2-8°C for (1-2 weeks). Long-term storage: Aliquot and store at -20°C to -80°C for up to 3 months, buffer containing 50% glycerol is recommended for reconstitution. Avoid repeat freeze-thaw cycles.
Reconstitution	Reconstitute at 0.25 µg/µl in 200 µl sterile water for short-term storage. Reconstitution with 200 µl 50% glycerol solution is recommended for longer term storage. If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

GENE INFORMATION

Gene Name TUBA1A

Official Symbol TUBA1A

Synonyms LIS3; TUBA3; B-ALPHA-1

Gene ID 7846

mRNA Refseq NM_001270399.1

Protein Refseq NP_001257328.1

MIM 602529

UniProt ID Q71U36

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SDS-PAGE of
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