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Product datasheet for SC116352

alpha Tubulin (TUBA1A) (NM_006009) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	alpha Tubulin (TUBA1A) (NM_006009) Human Untagged Clone
Tag:	Tag Free
Symbol:	alpha Tubulin
Synonyms:	B-ALPHA-1; LIS3; TUBA3
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene ORF within SC116352 sequence for NM_006009 edited (data generated by NextGen Sequencing)

ATGCGTGAGTGCATCTCCATCCACGTTGGCCAGGCTGGTGTCCAGATTGGCAATGCCTGC
TGGGAGCTCTACTGCCTGGAACACGGCATCCAGCCCGATGGCCAGATGCCAAGTGACAAG
ACCATTGGGGGAGGAGATGATTCCTTCAACACCTTCTTCAGTGAGACGGGGGCTGGCAAG
CATGTGCCCCGGGCAGTGTTTGTAGACTTGGAACCCACAGTCATTGATGAAGTTCGCACT
GGCACCTACCGCCAGCTCTTCCACCCTGAGCAACTTATCACAGGCAAGGAAGATGCTGCC
AATAACTATGCCCGAGGGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTTGGAC
CGAATTCGCAAGCTGGCCGACCAGTGCACGGGTCTCCAGGGCTTCTTGGTTTTCCACAGC
TTTGGTGGGGGAACTGGTTCTGGGTTCACCTCCCTGCTCATGGAACGTCTCTCAGTTGAT
TATGGCAAGAAGTCCAAGCTGGAGTTCTCTATTTACCCGGCGCCCCAGGTTTCCACAGCT
GTAGTTGAGCCCTACAACTCCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGT
GCCTTCATGGTAGACAATGAGGCCATCTATGACATCTGTCGTAGAAACCTCGATATTGAG
CGTCCAACCTATACTAACCTGAATAGGTTAATAGGTCAAATTGTGTCCTCCATCACTGCT
TCCCTGAGATTTGATGGAGCCCTGAATGTTGACCTGACAGAATTCCAGACCAACCTGGTG
CCCTATCCCCGCATCCACTTCCCTCTGGCCACATATGCCCCTGTCATCTCTGCTGAGAAA
GCCTACCATGAACAGCTTTCTGTAGCAGAGATCACCAATGCTTGCTTTGAGCCAGCCAAC
CAGATGGTGAAATGTGACCCTCGCCATGGTAAATACATGGCTTGCTGCCTGTTGTACCGT
GGTGACGTGGTTCCCAAAGATGTCAATGCTGCCATTGCCACCATCAAGACCAAGCGTACC
ATCCAGTTTGTGGATTGGTGCCCCACTGGCTTCAAGGTTGGCATCAACTACCAGCCTCCC
ACTGTGGTGCCTGGTGGAGACCTGGCCAAGGTACAGAGAGCTGTGTGCATGCTGAGCAAC
ACCACAGCCATTGCTGAGGCCTGGGCTCGCCTGGACCACAAGTTTGACCTGATGTATGCC
AAACGTGCCTTTGTTCACTGGTACGTTGGGGAGGGGATGGAGGAAGGTGAGTTTTCAGAG
GCCCGTGAGGACATGGCTGCCCTTGAGAAGGATTATGAGGAGGTTGGTGTGGATTCTGTT
GAAGGAGAGGGTGAGGAAGAAGGAGAGGAATACTAA

Clone variation with respect to NM_006009.2
288 a=>g;453 g=>c

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_006009 unedited

GGTGTTCGANNATTTTCGTGATGACGGACTGTACTTAGAGGGNNCGGCCGCGCAATTCGG
CACGAGGCTTACATCGACCGCCTAAGTAGTCGTGCTGTCAAGAAGCAACAACCGTCTCCT
CTTCGTCTTCGCCATCAGCTCGGCAGACGCGAAGCAGCAACCATGCGTGAGTGCATCTCC
ATCCACGTTGGCCAGGCTGGTGTCACAGATTGGCAATGCCTGCTGGGAGCTCTACTGCCT
GGAACACGGCATCCAGCCCGTATGGCCAGATGCCAAGAGACAAGACCATTGAGGGAGGAG
ATGATTCCTTCAACACCTTCTTTAAAGAGACGGGGGCTGGCAAGCATGTGCCCCGGGCAG
TGTTTGCACACTTGGAACCCACAGTCATTGATGAAGGTCGCACTGGCACCTACCGTCAGC
TCTTCCACCCTGAGCAACTTATCACAGGCAACGAAGATGCTGCCAATAACTATGCCCGAG
GGCACTACACCATTGGCAAGGAGATCATTGACCTCGTGTAGGACCGAATTCGCAAGATGG
CCGACCAGTGCACGGGTCTCCAGGGCTTCTTGGCTTTCCACAGCTTTGGTGGGGGAACTG
ATTCTGGGTCCACCTACCTGCTCATGGAAAGTGTCTCAGTTGATTATGGTAAGAAGATCA
AGGTGGAGTTCTCTATTTACCCGGCGCACCAGGTTTTCACAGCTGTAGTTGAGCACTAAA
CTGCATCCTCACCACCCACACCACCCTGGAGCACTCTGATTGTGCCTTTATGGTAGACAA
TGAAGGCCTTTTATGACATCTGTCGTAGAAACCTCGATATTGAGCGTGCAACCTATACTA
ACCTGAATAGGGTAATACGTCCAAATTGTGCCCTCCATAACTGCGTCTCCTGAAGATTGT
ATGGAGCCCTGAATGTTGACCTGGAAGCATTN

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3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_006009 unedited
GCACTTCCAGGGCCAGNATAGCACTGGGGAGGGGTCACAGGGATGCCACCCGGGATCTGT
TCAGGAAACAGCTATGACCGCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTC
ATTTAAGACAGGGAATACTTTATTCAAAACCCATCACAGAAATGGACAGCTTGGGTCTGT
AACAAAGCATTCATGTTTTAAAGCATAGGTCAGTAATTGTATATGAGAGCATACACTGCT
ACATACAAATTAACTGATCAGACCACAACTTTTCAATGTTTAAAACAGAATAAGCTTCCC
TGTAAAAGCAGCACCTTTGTGACGTTTTAACTTTAGTATTCCTCTCCTTCTTCCTCACCC
TCTCCTTCAACAGAATCCACACCAACCTCCTCATAATCCTTCTCAAGGGCAGCCATGTCC
TCACGGGCCTCTGAAAACTCACCTTCCTCCATCCCCTCCCCAACGTACCAGTGAACAAAG
GCACGTTTGGCATACATCAGGTCAAACTTGTGGTCCAGGCGAGCCCAGGCCTCAGCAATG
GNCTGTGGTGTTGCTCAGCATGCACACAGCTCTCTGTACCTTGGCCAGGTCTCCCCAGGC
ACCACAGTGGGAGGCTGGTAGTTGATGCCAACCTTGAAGCCAGTGGGGCACCAATCCACA
AACTGGATGGTACGCTTGGTCTTGATGGGTGGCATGGCAGCATTGACATCTTTGGGAACC
ACGTCACCACGTACAACAGGCAGCAGCATGTATTTACATGGCNAGGGTACATTTCACATC
TGGTTGGCTGGCTCAAGCAGCATGGGGGATCTCTGTCCGAAAGCTGTCATGGGAAGCTTT
CTAACAAAAGACAGGGCCTATTTGGCAAAGGAAATGGTTGCGGATAAGC
```

Restriction Sites: NotI-NotI

ACCN: NM_006009

Insert Size: 1730 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: NM_006009.2, NP_006000.2

RefSeq Size: 1677 bp

RefSeq ORF: 1356 bp

Locus ID: 7846

UniProt ID: Q71U36

Cytogenetics: 12q13.12

Domains: tubulin

Protein Families: Druggable Genome

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Protein Pathways: Gap junction, Pathogenic Escherichia coli infection

Gene Summary: 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]
Transcript Variant: This variant (1) represents the shortest transcript and encodes isoform 1. Variants 1 and 2 encode the same protein (isoform 1) but use distinct start codons.

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