

Recombinant Mouse Spast Protein, Myc/DDK-tagged

Cat. No. Spast-6075M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length spastin (Spast), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	ATP-dependent microtubule severing protein that specifically recognizes and cuts microtubules that are polyglutamylated. Preferentially recognizes and acts on microtubules decorated with short polyglutamate tails: severing activity increases as the number of glutamates per tubulin rises from one to eight, but decreases beyond this glutamylation threshold. Severing activity is not dependent on tubulin acetylation or detyrosination. Microtubule severing promotes reorganization of cellular microtubule arrays and the release of microtubules from the centrosome following nucleation. It is critical for the biogenesis and maintenance of complex microtubule arrays in axons, spindles and cilia. SPAST is involved in abscission step of cytokinesis and nuclear envelope reassembly during anaphase in cooperation with the ESCRT-III complex. Recruited at the midbody, probably by IST1, and participates in membrane fission during abscission together with the ESCRT-III complex. Recruited to the nuclear membrane by IST1 and mediates microtubule severing, promoting nuclear envelope sealing and mitotic spindle disassembly during late anaphase. Required for membrane traffic from the endoplasmic reticulum (ER) to the Golgi and endosome recycling. Recruited by IST1 to endosomes and regulates early endosomal tubulation and recycling by mediating microtubule severing. Probably

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plays a role in axon growth and the formation of axonal branches.

Molecular Mass	66.8 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Spast spastin [Mus musculus (house mouse)]
Official Symbol	Spast
Synonyms	SPAST; spastin; spastic paraplegia 4 homolog; Spg4; mKIAA1083
Gene ID	50850
mRNA Refseq	NM_016962
Protein Refseq	NP_058658
UniProt ID	Q9QYY8

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