

Datasheet for ABIN7555600

**Spastin Protein (SPAST) (AA 1-616) (His tag)**[Go to Product page](#)

## Overview

Quantity:	1 mg
Target:	Spastin (SPAST)
Protein Characteristics:	AA 1-616
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Spastin protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Purpose:	Custom-made recombinat SPAST Protein expressed in mammalian cells.
Sequence:	MNSPGGRGKK KGSGGASNPV PRRPPPPCLA PAPPAAAGPAP PPESPHKRNL YYFSYPLFVG FALLRLVAFH LGLLFVWLCQ RFSRALMAAK RSSGAAPAPA SASAPAPVPG GEAERVRFH KQAFEYISIA LRIDEDEKAG QKEQAVEWYK KGIEELEKGI AVIVTGQGEQ CERARRLQAK MMTNLVMKAD RLQLLEKMQP VLPFSKSQTD VYNDSTNLAC RNGTHLQSESG AVPKRKDPLT HTSNLPRSK TVMKTGSAGL SGHHRAPSYS GLSMVSGVKQ GSGPAPTTHK GTPKTNRTNK PSTPTTATRK KKD LKNFRNV DSNLANLIMN EIVDNGTAVK FDDIAGQDLA KQALQEIVIL PSLRPELFTG LRAPARGLLL FGPPGNGKTM LAKAVAAESN ATFFNISAAS LTSKYVGEGE KLVRALFAVA RELQPSIIFI DEVDSLCCER REGEHDASRR LKTEFLIEFD GVQSAGDDRV LVMGATNRPQ ELDEAVLRRF IKRVYVSLPN EETRLLLLKN LLCKQGSPLT QKELAQLARM TDGYSGSDLT ALAKDAALGP IRELKPEQVK NMSASEMRNI RLSDFTESLK KIKRSVSPQT LEAYIRWNKD FGDTTV <b>Sequence without tag. The proposed Purification-Tag is based on</b>

**experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

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### Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

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### Grade:

custom-made

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## Target Details

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### Target:

Spastin (SPAST)

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### Alternative Name:

SPAST ([SPAST Products](#))

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### Background:

Spastin (EC 5.6.1.1) (Spastic paraplegia 4 protein),FUNCTION: ATP-dependent microtubule severing protein that specifically recognizes and cuts microtubules that are polyglutamylated (PubMed:11809724, PubMed:15716377, PubMed:16219033, PubMed:17389232, PubMed:20530212, PubMed:22637577, PubMed:26875866). 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 (PubMed:26875866). Severing activity is not dependent on tubulin acetylation or detyrosination (PubMed:26875866). 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

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## Target Details

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cytokinesis and nuclear envelope reassembly during anaphase in cooperation with the ESCRT-III complex (PubMed:19000169, PubMed:21310966, PubMed:26040712). Recruited at the midbody, probably by IST1, and participates in membrane fission during abscission together with the ESCRT-III complex (PubMed:21310966). Recruited to the nuclear membrane by IST1 and mediates microtubule severing, promoting nuclear envelope sealing and mitotic spindle disassembly during late anaphase (PubMed:26040712). Required for membrane traffic from the endoplasmic reticulum (ER) to the Golgi and endosome recycling (PubMed:23897888). Recruited by IST1 to endosomes and regulates early endosomal tubulation and recycling by mediating microtubule severing (PubMed:23897888). Probably plays a role in axon growth and the formation of axonal branches (PubMed:15716377). {ECO:0000255|HAMAP-Rule:MF\_03021, ECO:0000269|PubMed:11809724, ECO:0000269|PubMed:15716377, ECO:0000269|PubMed:16219033, ECO:0000269|PubMed:17389232, ECO:0000269|PubMed:19000169, ECO:0000269|PubMed:20530212, ECO:0000269|PubMed:21310966, ECO:0000269|PubMed:22637577, ECO:0000269|PubMed:23897888, ECO:0000269|PubMed:26040712, ECO:0000269|PubMed:26875866}., FUNCTION: [Isoform 1]: Involved in lipid metabolism by regulating the size and distribution of lipid droplets. {ECO:0000269|PubMed:25875445}.

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Molecular Weight: 67.2 kDa

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UniProt: [Q9UBP0](#)

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Pathways: [Microtubule Dynamics](#), [M Phase](#), [Regulation of Cell Size](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: The buffer composition is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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## Handling

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months