

Datasheet for ABIN3137531

## KATNA1 Protein (AA 1-491) (Strep Tag)



[Go to Product page](#)

### Overview

|                               |   |
|-------------------------------|---|
| Quantity:                     | 250 µg  |
| Target:                       | KATNA1  |
| Protein Characteristics:      | AA 1-491  |
| Origin:                       | Mouse   |
| Source:                       | Cell-free protein synthesis (CFPS)              |
| Protein Type:                 | Recombinant                                     |
| Purification tag / Conjugate: | This KATNA1 protein is labelled with Strep Tag. |
| Application:                  | Western Blotting (WB), SDS-PAGE (SDS), ELISA    |

### Product Details

|           |   |
|-----------|---|
| Brand:    | AliCE®  |
| Sequence: | <p>MSLQMIVENV KLAREYALLG NYDSAMVYYQ GVLDQMKNKYL YSVKDTHLRQ KWQQVWQEIN<br/> VEAKQVKDIM KTLESFKLDI TSLQAAQHEL PAAEGEVWSL PVPVERRPLP GPRKRQSSQH<br/> SDPKPHSNRP STVVRAHRPS PQNLHNDRGK AVRSREKKEQ SKGREEKNKL PAAVTEPEAN<br/> KFDGTGYDKD LVEALERDII SQPNPNVRWYD IADLVEAKKL LQEAVVLP MW MPEFFKGIRR<br/> PWKGVLMVGP PGTGKTLLAK AVATECKTTF FNVSSSTLTS KYRGESEKLV RLLFEMARFY<br/> SPATIFIDEI DSICSRRGTS EEHEASRRMK AELLVQMDGV GGASEND DPS KMVMVLAATN<br/> FPWDIDEALR RRLEKRIYIP LPSAKGREEL LRISLRELEL ADDVNLASIA ENMEGYSGAD<br/> ITNVCRDASL MAMRRRIEGL TPEEIRNLSR EAMHMPTTME DFEMALKKIS KSVSAADIER<br/> YEKWIVEFGS C</p> <p><b>Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you</b></p> |

**have a special request, please contact us.**

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Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

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Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

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Purity:

> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

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Grade:

custom-made

## Target Details

|                   |   |
|-------------------|---|
| Target:           | KATNA1  |
| Alternative Name: | Katna1 ( <a href="#">KATNA1 Products</a> )  |
| Background:       | <p>Katanin p60 ATPase-containing subunit A1 (Katanin p60 subunit A1) (EC 5.6.1.1) (Lipotransin) (p60 katanin),FUNCTION: Catalytic subunit of a complex which severs microtubules in an ATP-dependent manner. Microtubule severing may promote rapid reorganization of cellular microtubule arrays and the release of microtubules from the centrosome following nucleation. Microtubule release from the mitotic spindle poles may allow depolymerization of the microtubule end proximal to the spindle pole, leading to poleward microtubule flux and poleward motion of chromosome. The function in regulating microtubule dynamics at spindle poles seems to depend on the association of the katanin KATNA1:KATNB1 complex with ASPM which recruits it to microtubules. Reversely KATNA1:KATNB1 can enhance ASPM blocking activity on microtubule minus-end growth. Microtubule release within the cell body of neurons may be required for their transport into neuronal processes by microtubule-dependent motor proteins. This transport is required for axonal growth. {ECO:0000255 HAMAP-Rule:MF_03023, ECO:0000269 PubMed:28436967}.</p> |
| Molecular Weight: | 55.9 kDa  |
| UniProt:          | <a href="#">Q9WV86</a>  |
| Pathways:         | <a href="#">Microtubule Dynamics</a>  |

## Application Details

|                    |  |
|--------------------|--|
| 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.   |
| Comment:           | <p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.</p> <p>During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!</p> |

Application Details

Restrictions: For Research Use only

Handling

|                  |  |
|------------------|--|
| Format:          | Liquid   |
| Buffer:          | The buffer composition is at the discretion of the manufacturer.<br>Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b> |
| Handling Advice: | Avoid repeated freeze-thaw cycles.   |
| Storage:         | -80 °C   |
| Storage Comment: | Store at -80°C.  |
| Expiry Date:     | 12 months  |