

Datasheet for ABIN3082372

ECAT1 Protein (AA 1-217) (Strep Tag)



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1 Image

Overview

Quantity:	1 mg
Target:	ECAT1 (KHDC3L)
Protein Characteristics:	AA 1-217
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ECAT1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MDAPRRFPTL VQLMQPKAMP VEVLGHLPKR FSWFHSEFLK NPKVVRLEWV LVEKIFGRGG
ERIPHVQGMS QILIHVNRLD PNGEAEILVF GRPSYQEDTI KMIMNLADYH RQLQAKGSGK
ALAQDVATQK AETQRSSIEV REAGTQRSVE VREAGTQRSV EVQEVGTQGS PVEVQEAGTQ
QSLQAANKSG TQRSPEAASK AVTQRFREDA RDPVTRL

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 have a special request, please contact us.

Characteristics: Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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 in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none">1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Product Details

Grade: Crystallography grade

Target Details

Target: ECAT1 (KHDC3L)

Alternative Name: KHDC3L ([KHDC3L Products](#))

Background: KH domain-containing protein 3 (ES cell-associated transcript 1 protein) (KHDC3-like protein),FUNCTION: As part of the OOEP-KHDC3 scaffold, recruits BLM and TRIM25 to DNA replication forks, thereby promoting the ubiquitination of BLM by TRIM25, enhancing BLM retainment at replication forks and therefore promoting stalled replication fork restart (By similarity). Regulates homologous recombination-mediated DNA repair via recruitment of RAD51 to sites of DNA double-strand breaks, and sustainment of PARP1 activity, which in turn modulates downstream ATM or ATR activation (PubMed:31609975). Activation of ATM or ATR in response to DNA double-strand breaks may be cell-type specific (By similarity). Its role in DNA double-strand break repair is independent of its role in restarting stalled replication forks (By similarity). As a member of the subcortical maternal complex (SCMC), plays an essential role for zygotes to progress beyond the first embryonic cell divisions via regulation of actin dynamics (By similarity). Required for maintenance of euploidy during cleavage-stage embryogenesis (By similarity). Required for the formation of F-actin cytoplasmic lattices in oocytes which in turn are responsible for symmetric division of zygotes via the regulation of mitotic spindle formation and positioning (By similarity). Ensures proper spindle assembly by regulating the localization of AURKA via RHOA signaling and of PLK1 via a RHOA-independent process (By similarity). Required for the localization of MAD2L1 to kinetochores to enable spindle assembly checkpoint function (By similarity). Promotes neural stem cell neurogenesis and neuronal differentiation in the hippocampus (By similarity). May regulate normal development of learning, memory and anxiety (By similarity). Capable of binding RNA (By similarity). {ECO:0000250|UniProtKB:F6SZT2, ECO:0000250|UniProtKB:Q9CWU5, ECO:0000269|PubMed:31609975}.

Molecular Weight: 24.3 kDa

UniProt: [Q587J8](#)

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

Application Details

guarantee though.

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Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process