Datasheet for ABIN3089316

PYCARD Protein (AA 1-195) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	PYCARD
Protein Characteristics:	AA 1-195
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PYCARD protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MGRARDAILD ALENLTAEEL KKFKLKLLSV PLREGYGRIP RGALLSMDAL DLTDKLVSFY LETYGAELTA NVLRDMGLQE MAGQLQAATH QGSGAAPAGI QAPPQSAAKP GLHFIDQHRA ALIARVTNVE WLLDALYGKV LTDEQYQAVR AEPTNPSKMR KLFSFTPAWN WTCKDLLLQA LRESQSYLVE DLERS **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®): 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)

Target Details

Target:	PYCARD
Alternative Name:	PYCARD (PYCARD Products)
Background:	Apoptosis-associated speck-like protein containing a CARD (hASC) (Caspase recruitment domain-containing protein 5) (PYD and CARD domain-containing protein) (Target of methylation-induced silencing 1),FUNCTION: Functions as a key mediator in apoptosis and inflammation (PubMed:17599095, PubMed:25847972, PubMed:19494289, PubMed:15030775, PubMed:17349957, PubMed:19158675, PubMed:19158676, PubMed:30674671, PubMed:34678144, PubMed:24630722, PubMed:21487011, PubMed:19234215, PubMed:11103777, PubMed:12646168). Promotes caspase-mediated apoptosis involving predominantly caspase-8 and also caspase-9 in a probable cell type-specific manner (PubMed:11103777, PubMed:12646168). Involved in activation of the mitochondrial apoptotic pathway, promotes caspase-8-dependent proteolytic maturation of BID independently of FADD in certain cell types and also mediates mitochondrial translocation of BAX and activates BAX-dependent apoptosis coupled to activation of caspase-9, -2 and -3 (PubMed:16964285, PubMed:14730312). Involved in innate immune response by acting as an integral adapter in the assembly of various inflammasomes (NLRP1, NLRP2, NLRP3, NLRP6, AIM2 and probably IFI16) which recruit and activate caspase-1 leading to processing and secretion of pro-inflammatory cytokines (PubMed:17599095, PubMed:25847972, PubMed:15030775, PubMed:17349957, PubMed:19158675, PubMed:19158676, PubMed:30674671, PubMed:34678144, PubMed:16982856, PubMed:24630722, PubMed:21487011, PubMed:19234215, PubMed:23530044, PubMed:29440442, PubMed:33980849). Caspase-1-dependent inflammation leads to macrophage pyroptosis, a form of cell death (PubMed:24630722). The function as activating adapter in different types of inflammasomes is mediated by the pyrin and CARD domains and their homotypic interactions (PubMed:19234215, PubMed:14499617, PubMed:24630722). Clustered PYCARD nucleates the formation of caspase-1 filaments through the interaction of their respective CARD domains, acting as a platform for of caspase-1 polymerization (PubMed:24630722). In the NLRP1 and NLRC4 inflammasomes seems not be required but facilitates the processing of procaspase-1 (PubMed:17349957). In cooperation with NOD2 involved in an inflammasome activated by bacterial muramyl dipeptide leading to caspase-1 activation (PubMed:16964285). May be involved in RIGI-triggered pro-inflammatory responses and inflammasome activation (PubMed:19915568). In collaboration with AIM2 which detects cytosolic double-stranded DNA may also be involved in a caspase-1-independent cell death that involves caspase-8 (PubMed:19158675, PubMed:19158676). In adaptive immunity may be involved in maturation of dendritic cells to stimulate T-cell immunity and in cytoskeletal rearrangements coupled to chemotaxis and antigen uptake may be involved in

	post-transcriptional regulation of the guanine nucleotide exchange factor DOCK2, the latter function is proposed to involve the nuclear form (PubMed:22732093). Also involved in transcriptional activation of cytokines and chemokines independent of the inflammasome, this function may involve AP-1, NF-kappa-B, MAPK and caspase-8 signaling pathways (PubMed:12486103, PubMed:16585594). For regulation of NF-kappa-B activating and inhibiting functions have been reported (PubMed:12486103). Modulates NF-kappa-B induction at the level of the IKK complex by inhibiting kinase activity of CHUK and IKBK (PubMed:12486103, PubMed:16585594). Proposed to compete with RIPK2 for association with CASP1 thereby down-regulating CASP1-mediated RIPK2-dependent NF-kappa-B activation and activating interleukin-1 beta processing (PubMed:16585594). Modulates host resistance to DNA virus infection, probably by inducing the cleavage of and inactivating CGAS in presence of cytoplasmic double-stranded DNA (PubMed:28314590). {ECO:0000269|PubMed:11103777, ECO:0000269|PubMed:12486103, ECO:0000269|PubMed:12646168, ECO:0000269|PubMed:14499617, ECO:0000269|PubMed:14730312, ECO:0000269|PubMed:15030775, ECO:0000269|PubMed:16585594, ECO:0000269|PubMed:16964285, ECO:0000269|PubMed:16982856, ECO:0000269|PubMed:17349957, ECO:0000269|PubMed:17599095, ECO:0000269|PubMed:19158675, ECO:0000269|PubMed:19158676, ECO:0000269|PubMed:19234215, ECO:0000269|PubMed:19494289, ECO:0000269|PubMed:19915568, ECO:0000269|PubMed:21487011, ECO:0000269|PubMed:22732093, ECO:0000269|PubMed:23530044, ECO:0000269|PubMed:24630722, ECO:0000269|PubMed:25847972, ECO:0000269|PubMed:28314590, ECO:0000269|PubMed:29440442, ECO:0000269|PubMed:30674671, ECO:0000269|PubMed:33980849, ECO:0000269|PubMed:34678144}., FUNCTION: [Isoform 2]: May have a regulating effect on the function as inflammasome adapter. {ECO:0000269|PubMed:19759850, ECO:0000269|PubMed:20482797}., FUNCTION: [Isoform 3]: Seems to inhibit inflammasome-mediated maturation of interleukin-1 beta. {ECO:0000269|PubMed:20482797}.
Molecular Weight:	21.6 kDa
UniProt:	Q9ULZ3
Pathways:	Activation of Innate immune Response, Cellular Response to Molecule of Bacterial Origin, Regulation of Actin Filament Polymerization, Positive Regulation of Endopeptidase Activity, Activated T Cell Proliferation, Inflammasome

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:	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!
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)