Datasheet for ABIN7552364

PYCARD Protein (AA 1-195) (His tag)

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Overview

Quantity:	1 mg
Target:	PYCARD
Protein Characteristics:	AA 1-195
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PYCARD protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat PYCARD Protein expressed in mammalien cells.
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 Purification-Tag is based on 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.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.

Product Details

	• 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

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,

Target Details

	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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months