Datasheet for ABIN7561917

CARD9 Protein (AA 1-536) (His tag)

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Overview

Quantity:	1 mg
Target:	CARD9
Protein Characteristics:	AA 1-536
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CARD9 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat Card9 Protein expressed in mammalien cells.
Sequence:	MSDYENDDEC WSTLESFRVK LISVIDPSRI TPYLRQCKVL NPDDEEQVLS DPNLVIRKRK VGVLLDILQR TGHKGYVAFL ESLELYYPQL YRKVTGKEPA RVFSMIIDAS GESGLTQLLM TEVMKLQKKV QDLTALLSSK DDFIKELRVK DSLLRKHQER VQRLKEECEL SSAELKRCKD ENYELAMCLA HLSEEKGAAL MRNRDLQLEV DRLRHSLMKA EDDCKVERKH TLKLRHAMEQ RPSQELLWEL QQEKDLLQAR VQELQVSVQE GKLDRNSPYI QVLEEDWRQA LQEHQKQVST IFSLRKDLRQ AETLRARCTE EKEMFELQCL ALRKDAKMYK DRIEAILLQM EEVSIERDQA MASREELHAQ CTQSFQDKDK LRKLVRELGE KADELQLQLF QTESRLLAAE GRLKQQQLDM LILSSDLEDS SPRNSQELSL PQDLEEDAQL SDKGVLADRE SPEQPFMALN KEHLSLTHGM GPSSSEPPEK ERRRLKESFE NYRRKRALRK MQNSWRQGEG DRGNTTGSDN TDTEGS **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**

Product Details

	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. • 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:	CARD9
Alternative Name:	Card9 (CARD9 Products)
Background:	Caspase recruitment domain-containing protein 9,FUNCTION: Adapter protein that plays a key role in innate immune response against fungi by forming signaling complexes downstream of C-type lectin receptors (PubMed:16862125, PubMed:20538615, PubMed:26679537, PubMed:29080677). CARD9-mediated signals are essential for antifungal immunity against a subset of fungi from the phylum Ascomycota (PubMed:16862125, PubMed:20538615, PubMed:24470469, PubMed:25621893, PubMed:26679537, PubMed:29080677, PubMed:32548948). Transduces signals in myeloid cells downstream of C-type lectin receptors CLEC7A (dectin-1), CLEC6A (dectin-2) and CLEC4E (Mincle), which detect pathogen-associated molecular pattern metabolites (PAMPs), such as fungal carbohydrates, and trigger CARD9 activation (PubMed:16862125, PubMed:20538615). Upon activation, CARD9 homooligomerizes to form a nucleating helical template that recruits BCL10 via CARD-CARD interaction, thereby promoting polymerization of BCL10 and subsequent recruitment of MALT1: this leads to

	activation of NF-kappa-B and MAP kinase p38 (MAPK11, MAPK12, MAPK13 and/or MAPK14) pathways which stimulate expression of genes encoding pro-inflammatory cytokines and chemokines (PubMed:16862125, PubMed:20538615, PubMed:22265677, PubMed:29080677). CARD9 signaling in antigen-presenting cells links innate sensing of fungi to the activation of adaptive immunity and provides a cytokine milieu that induces the development and subsequent of interleukin 17-producing T helper (Th17) cells (PubMed:17450144, PubMed:24470469, PubMed:32358020). Also involved in activation of myeloid cells via classical ITAM-associated receptors and TLR: required for TLR-mediated activation of MAPK, while it is not required for TLR-induced activation of NF-kappa-B (PubMed:17486093). CARD9 can also be engaged independently of BCL10: forms a complex with RASGRF1 downstream of C-type lectin receptors, which recruits and activates HRAS, leading to ERK activation and the production of cytokines (PubMed:25267792). Acts as an important regulator of the intestinal commensal fungi (mycobiota) component of the gut microbiota (PubMed:27158904, PubMed:33548172). Plays an essential role in antifungal immunity against dissemination of gut fungi: acts by promoting induction of antifungal IgG antibodies response in CX3CR1(+) macrophages to confer protection against disseminated C.albicans or C.auris infection (PubMed:33548172). Also mediates immunity against other pathogens, such as certain bacteria, viruses and parasites, CARD9 signaling is however redundant with other innate immune responses (PubMed:17187069, PubMed:26679537, PubMed:29080677). In response to L.monocytogenes infection, required for the production of inflammatory cytokines activated by intracellular peptidoglycan: acts by connecting NOD2 recognition of peptidoglycan to downstream activation of MAP kinases (MAPK) without activating NF-kappa-B (PubMed:17187069). {ECO:0000269|PubMed:16862125, ECO:0000269|PubMed:17187069, ECO:0000269|PubMed:17450144, ECO:0000269|PubMed:17486093, ECO:0000269|PubMed:20538615, ECO:0000269|PubMed:22265677, ECO:0000269|PubMed:24470469, ECO:0000269|PubMed:25267792, ECO:0000269|PubMed:25621893, ECO:0000269|PubMed:26679537, ECO:0000269|PubMed:27158904, ECO:0000269|PubMed:29080677, ECO:0000269|PubMed:32358020, ECO:0000269|PubMed:32548948, ECO:0000269|PubMed:33548172}.
Molecular Weight:	62.5 kDa
UniProt:	A2AIV8
Pathways:	Activation of Innate immune Response

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

