Datasheet for ABIN7557606

IRGM Protein (AA 1-409) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	IRGM
Protein Characteristics:	AA 1-409
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This IRGM protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Purpose:	Custom-made recombinat Irgm1 Protein expressed in mammalien cells.
Sequence:	MKPSHSSCEA APLLPNMAET HYAPLSSAFP FVTSYQTGSS RLPEVSRSTE RALREGKLLE LVYGIKETVA TLSQIPVSIF VTGDSGNGMS SFINALRVIG HDEDASAPTG VVRTTKTRTE YSSSHFPNVV LWDLPGLGAT AQTVEDYVEE MKFSTCDLFI IIASEQFSSN HVKLSKIIQS MGKRFYIVWT KLDRDLSTSV LSEVRLLQNI QENIRENLQK EKVKYPPVFL VSSLDPLLYD FPKLRDTLHK DLSNIRCCEP LKTLYGTYEK IVGDKVAVWK QRIANESLKN SLGVRDDDNM GECLKVYRLI FGVDDESVQQ VAQSMGTVVM EYKDNMKSQN FYTLRREDWK LRLMTCAIVN AFFRLLRFLP CVCCCLRRLR HKRMLFLVAQ DTKNILEKIL RDSIFPPQI **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:

Product Details

- 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:	IRGM
Alternative Name:	Irgm1 (IRGM Products)
Background:	Immunity-related GTPase family M protein 1 (EC 3.6.5.-) (Interferon-inducible GTPase 3) (Interferon-inducible protein 1) (LPS-stimulated RAW 264.7 macrophage protein 47) (LRG-47),FUNCTION: Immunity-related GTPase that plays important roles in innate immunity and inflammatory response (PubMed:11457893, PubMed:14576437, PubMed:14707092, PubMed:15908352, PubMed:16339555, PubMed:17911638, PubMed:17982087, PubMed:19620982, PubMed:19920210). Acts as a dynamin-like protein that binds to intracellular membranes and promotes remodeling and trafficking of those membranes (PubMed:19620982, PubMed:27098192). Required for clearance of acute protozoan and bacterial infections by interacting with autophagy and lysosome regulatory proteins, thereby promoting the fusion of phagosomes with lysosomes for efficient degradation of cargo including microbes (PubMed:11457893, PubMed:14576437, PubMed:15607973, PubMed:14707092, PubMed:15908352, PubMed:16339555, PubMed:17982087, PubMed:19620982, PubMed:19920210, PubMed:24751652, PubMed:21757726, PubMed:22874556, PubMed:32453761). Regulates selective autophagy, including xenophagy

and mitophagy, both directly and indirectly (PubMed:15607973, PubMed:21757726). Directly regulates autophagy by acting as a molecular adapter that promotes the coassembly of the core autophagy machinery to mediate antimicrobial defense: Irgm1 (1) activates AMPK, which in turn phosphorylates ULK1 and BECN1 to induce autophagy, (2) promotes the coassembly of ULK1 and BECN1, enhancing BECN1-interacting partners and (3) influences the composition of the BECN1 complex, by competing with the negative regulators BCL2 and RUBCN, to trigger autophagy (By similarity). Also activates autophagy by promoting recruitment of STX17 to autophagosomes (By similarity). In collaboration with ATG8 proteins, regulate lysosomal biogenesis, a fundamental process for any autophagic pathway, by promoting TFEB dephosphorylation (By similarity). Also modulates autophagy by assisting with autophagosome formation and preventing lysosomal deacidification (PubMed:21757726). Regulates autophagy by affecting mitochondrial fusion and fission (PubMed:24751652). Also involved in M1 macrophage activation for the production of proinflammatory cytokines (PubMed:15908352, PubMed:27439214, PubMed:27443879). While activating autophagy, acts as a key negative regulator of the inflammatory and interferon responses both by (1) promoting mitophagy and (2) mediating autophagy-dependent degradation of effectors of the inflammatory response (PubMed:30612879, PubMed:34467632, PubMed:33510463). Promotes degradation of damaged and IFNG/IFN-gamma-stressed mitochondria via mitophagy, preventing cytosolic release of ligands that activate inflammation (PubMed:32715615, PubMed:33510463). Negatively regulates interferon-signaling in hematopoietic stem cells, preserving hematopoietic stem cell number and function (PubMed:18371424, PubMed:21633090). Promotes expansion of activated CD4(+) T-cells by inhibiting IFNG/IFN-gamma signaling, thereby preventing Ifng-mediated cell death of CD4(+) T-cells (PubMed:18806793). Acts as a suppressor of inflammation by promoting recruitment of inflammation effectors, such as CGAS, RIGI/RIG-I and NLRP3, to autophagosome membranes, leading to their SQSTM1/p62-dependent autophagic degradation (By similarity). Also directly inhibits assembly of the NLRP3 inflammasome by preventing the association between NLRP3 and PYCARD (By similarity). Acts as a negative regulator of antiviral innate immune response by suppressing the RIPK2-dependent pro-inflammatory response: mediates recruitment of RIPosomes, composed of RIPK2 and NOD1 or NOD2, to autophagosome membranes, promoting their SQSTM1/p62-dependent autophagic degradation (By similarity). {ECO:0000250|UniProtKB:A1A4Y4, ECO:0000269|PubMed:11457893, ECO:0000269|PubMed:14576437, ECO:0000269|PubMed:14707092, ECO:0000269|PubMed:15607973, ECO:0000269|PubMed:15908352, ECO:0000269|PubMed:16339555, ECO:0000269|PubMed:17911638, ECO:0000269|PubMed:17982087, ECO:0000269|PubMed:18371424, ECO:0000269|PubMed:18806793,

Target Details

	ECO:0000269|PubMed:19620982, ECO:0000269|PubMed:19920210, ECO:0000269|PubMed:21633090, ECO:0000269|PubMed:21757726, ECO:0000269|PubMed:22874556, ECO:0000269|PubMed:24751652, ECO:0000269|PubMed:27098192, ECO:0000269|PubMed:27439214, ECO:0000269|PubMed:27443879, ECO:0000269|PubMed:30612879, ECO:0000269|PubMed:32453761, ECO:0000269|PubMed:32715615, ECO:0000269|PubMed:33510463, ECO:0000269|PubMed:34467632}.
Molecular Weight:	46.6 kDa
UniProt:	Q60766

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