

Datasheet for ABIN3082199

## IRG1 Protein (AA 1-481) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	IRG1
Protein Characteristics:	AA 1-481
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This IRG1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Brand:	AlIcE®
Sequence:	<p> MMLKSITESF ATAIHGLKVG HLTDRVIQRS KRMILDTLGA GFLGTTTEVF HIASQYSKIY  SSNISSTVWG QPDIRLPPTY AAFVNGVAIH SMDFDDTWHP ATHPSGAVLP VLTALAEALP  RSPKFSGLDL LLAFNVGIEV QGRLLHFAKE ANDMPKRFHP PSVVGTLGSA AAASKFLGLS  STKCREALAI AVSHAGAPMA NAATQTKPLH IGNAAKHGIE AAFLAMLGLQ GNKQVLDLEA  GFGAFYANYS PKVLPSIASY SWLLDQQDVA FKRFP AHLST HWVADAAASV RKHLVAERAL  LPTDIYIKRIV LRIPNVQYVN RPFVPSEHEA RHSFQYVACA MLLDGGITVP SFHECQINRP  QVRELLSKVE LEYPPDNLPS FNILYCEISV TLKD GATFTD RSDTFYGHWR KPLSQEDLEE  KFRANASKML SWDTVESLIK IVKNLEDLED CSVLT TLLKG PSPPEVASNS PACNNSITNL S </p> <p><b>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.</b></p>

# Product Details

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Characteristics:	<div>Key Benefits:</div> <ul style="list-style-type: none"><li>• Made in Germany - from design to production - by highly experienced protein experts.</li><li>• Protein expressed with ALiCE® and purified in one-step affinity chromatography</li><li>• These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).</li><li>• State-of-the-art algorithm used for plasmid design (Gene synthesis).</li></ul> <p>This protein is a <b>made-to-order protein</b> and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.</p> <p>The big advantage of ordering our <b>made-to-order proteins</b> 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.</p> <div>Expression System:</div> <ul style="list-style-type: none"><li>• ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</li><li>• 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!</li></ul> <div>Concentration:</div> <ul style="list-style-type: none"><li>• The concentration of our recombinant proteins is measured using the absorbance at 280nm.</li><li>• The protein's absorbance will be measured against its specific reference buffer.</li><li>• We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.</li></ul>
Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

## Target Details

Target:	IRG1
Alternative Name:	ACOD1 ( <a href="#">IRG1 Products</a> )
Background:	<p>Cis-aconitate decarboxylase (CAD) (EC 4.1.1.6) (Aconitate decarboxylase) (Aconitate decarboxylase 1) (Cis-aconitic acid decarboxylase) (Immune-responsive gene 1 protein),FUNCTION: Cis-aconitate decarboxylase that catalyzes production of itaconate and is involved in the inhibition of the inflammatory response (PubMed:23609450, PubMed:23610393, PubMed:31548418, PubMed:35662396). Acts as a negative regulator of the Toll-like receptors (TLRs)-mediated inflammatory innate response by stimulating the tumor necrosis factor alpha-induced protein TNFAIP3 expression via reactive oxygen species (ROS) in LPS-tolerized macrophages (PubMed:23609450). Involved in antimicrobial response of innate immune cells, ACOD1-mediated itaconic acid production contributes to the antimicrobial activity of macrophages by generating itaconate, leading to alkylation of proteins, such as TFEB (PubMed:23610393, PubMed:35662396). Involved in antiviral response following infection by flavivirus in neurons: ACOD1-mediated itaconate production inhibits the activity of succinate dehydrogenase, generating a metabolic state in neurons that suppresses replication of viral genomes (By similarity). Plays a role in the embryo implantation (By similarity).</p> <p>{ECO:0000250 UniProtKB:P54987, ECO:0000269 PubMed:23609450, ECO:0000269 PubMed:23610393, ECO:0000269 PubMed:31548418, ECO:0000269 PubMed:35662396}.</p>
Molecular Weight:	52.6 kDa
UniProt:	<a href="#">A6NKO6</a>

## 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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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</p>

Application Details

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Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b>
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months