10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IRG1 Rabbit pAb

IRG1 Rabbit pAb
Catalog # AP56366

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	A6NK06
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52628
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human IRG1
Epitope Specificity	1-100/481
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Mitochondrion
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	IRG1 is a 481 amino acid protein that belongs to the prpD family and is encoded by a gene which maps to human chromosome 13. Comprising nearly 4% of the human genome, chromosome 13 contains around 114 million base pairs and encodes over 400 genes. Chromosome 13 houses key tumor suppressor genes, including BRCA2 and RB1, which are associated with breast cancer susceptibility and retinoblastoma, respectively. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections

Additional Information

Gene ID	730249
Other Names	Cis-aconitate decarboxylase, CAD, 4.1.1.6, Aconitate decarboxylase, Aconitate decarboxylase 1 {ECO:0000312|HGNC:HGNC:33904}, Cis-aconitic acid decarboxylase, Immune-responsive gene 1 protein, ACOD1 (HGNC:33904)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ACOD1 (HGNC:33904)
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).
Cellular Location	Mitochondrion {ECO:0000250|UniProtKB:P54987}.
Tissue Location	Expressed in LPS-tolerized macrophages (at protein level). Expressed in peripheral blood mononuclear cells (PBMCs), microglia and macrophage cells.

Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.