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GBP7 Rabbit pAb

Catalog # AP96497

Product Information

Application	WB, E
Primary Accession	Q8N8V2
Other Accession	Q8N8V2
Predicted	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	72513
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GBP7
Epitope Specificity	451-550/638
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the GBP family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Guanylate-binding proteins, such as GBP7, are induced by interferon and hydrolyze GTP to both GDP and GMP.

Additional Information

Gene ID	388646
Other Names	GBP4L; 9830147J24Rik; GBP-7; GBP7_HUMAN; GBP7; GTP-binding protein 7 (GBP-7); Guanine nucleotide-binding protein 7; Guanylate-binding protein 4-like; 3.6.1.-; 3.6.5.-; GBP7_MOUSE; guanylate binding protein 7
Dilution	WB=1:500-2000,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	GBP7
Synonyms	GBP4L
Function	Interferon (IFN)-inducible GTPase that plays important roles in innate immunity against a diverse range of bacterial, viral and protozoan pathogens

(By similarity). Hydrolyzes GTP to GMP in two consecutive cleavage reactions and predominantly uses GTP and not GDP or GMP as the substrate (By similarity). Following infection, recruited to the pathogen-containing vacuoles or vacuole-escaped bacteria and acts as a positive regulator of inflammasome assembly by promoting the release of inflammasome ligands from bacteria (By similarity). Acts by promoting lysis of pathogen-containing vacuoles, releasing pathogens into the cytosol (By similarity). Following pathogen release in the cytosol, promotes recruitment of proteins that mediate bacterial cytolysis: this liberates ligands that are detected by inflammasomes, such as lipopolysaccharide (LPS) that activates the non-canonical CASP4/CASP11 inflammasome or double-stranded DNA (dsDNA) that activates the AIM2 inflammasome (By similarity). Also promotes IFN-gamma-mediated host defense against bacterial infections by regulating oxidative responses and bacteriolytic peptide generation (By similarity). May help to assemble NADPH oxidase on phagosomal membranes by acting as a bridging protein between NADPH oxidase cytosolic subunits NCF2-NCF4 and the membrane subunits CYBA-CYBB (By similarity). Participates along with GBP1 in trafficking monoubiquitinated protein cargo to autolysosomes for generating ubiquitin-derived antimicrobial peptides (By similarity). Facilitates influenza A virus replication by inhibiting the activation of NF-kappaB and JAK-STAT signaling pathways and the expression of type I, type III interferons and pro-inflammatory cytokines (PubMed:33408175). Confers protection to several pathogens, including the bacterial pathogens Listeria monocytogenes and Mycobacterium bovis BCG as well as the protozoan pathogen Toxoplasma gondii (By similarity). Required for disruption of the parasitophorous vacuole formed following T.gondii infection and subsequent killing of the parasite (By similarity).

Cellular Location Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:Q91Z40}

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