

GBP7 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP4910b

Product Information

Application	WB, FC, E
Primary Accession	Q8N8V2
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB25961
Calculated MW	72513
Antigen Region	520-547

Additional Information

Gene ID	388646
Other Names	Guanylate-binding protein 7, GTP-binding protein 7, GBP-7, Guanine nucleotide-binding protein 7, Guanylate-binding protein 4-like, GBP7, GBP4L
Target/Specificity	This GBP7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 520-547 amino acids from the C-terminal region of human GBP7.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GBP7 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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}

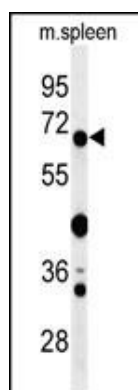
Background

Guanylate-binding proteins, such as GBP7, are induced by interferon and hydrolyze GTP to both GDP and GMP.

References

Olszewski, M.A., et al. J. Interferon Cytokine Res. 26(5):328-352(2006)

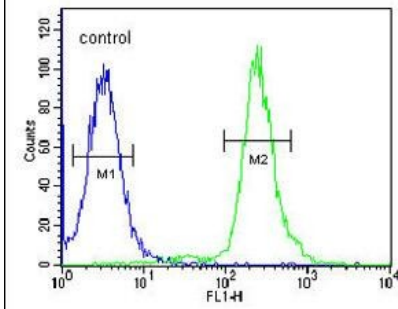
Images



Western blot analysis of GBP7 Antibody (C-term) (Cat. #AP4910b) in mouse spleen tissue lysates (35ug/lane). GBP7 (arrow) was detected using the purified Pab.

GBP7 Antibody (C-term) (Cat. #AP4910b) flow cytometric analysis of 293 cells (right histogram) compared to a

293



negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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