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GBP2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20488c

Product Information

Application	WB, E
Primary Accession	P32456
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	67209
Antigen Region	192-220

Additional Information

Gene ID	2634
Other Names	Interferon-induced guanylate-binding protein 2, GTP-binding protein 2, GBP-2, HuGBP-2, Guanine nucleotide-binding protein 2, GBP2
Target/Specificity	This GBP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 192-220 amino acids from the Central region of human GBP2.
Dilution	WB~~1:1000 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	GBP2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GBP2 {ECO:0000303|PubMed:8706832, ECO:0000312|HGNC:HGNC:4183}
Function	Interferon (IFN)-inducible GTPase that plays important roles in innate immunity against a diverse range of bacterial, viral and protozoan pathogens (PubMed:31091448). Hydrolyzes GTP to GMP in 2 consecutive cleavage reactions, but the major reaction product is GDP (PubMed:8706832). 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). Confers protection to the protozoan pathogen Toxoplasma gondii (By similarity). Independently of its GTPase activity, acts as an inhibitor of various viruses infectivity, such as HIV-1, Zika and influenza A viruses, by inhibiting FURIN-mediated maturation of viral envelope proteins (PubMed:31091448).

Cellular Location

Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:Q9Z0E6}; Lipid-anchor. Golgi apparatus membrane; Lipid- anchor. Cytoplasm. Cytoplasm, perinuclear region. Note=GBP2-GBP5 dimers localize to the Golgi apparatus.

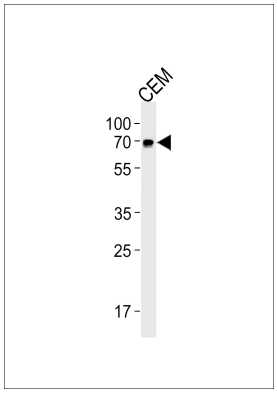
Background

Binds GTP, GDP and GMP. Hydrolyzes GTP very efficiently; GDP rather than GMP is the major reaction product.

References

Cheng Y.-S.E., et al. Mol. Cell. Biol. 11:4717-4725(1991).
Schwemmle M., et al. Submitted (SEP-1991) to the EMBL/GenBank/DDBJ databases.
Bechtel S., et al. BMC Genomics 8:399-399(2007).
Ota T., et al. Nat. Genet. 36:40-45(2004).
Ebert L., et al. Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.

Images



GBP2 Antibody (Center) (Cat. #AP20488c) western blot analysis in CEM cell line lysates (35ug/lane).This demonstrates the GBP2 antibody detected the GBP2 protein (arrow).