

GBP2 Blocking Peptide (Center)
Synthetic peptide
Catalog # BP20488c**Specification**

GBP2 Blocking Peptide (Center) - Product InformationPrimary Accession [P32456](#)**GBP2 Blocking Peptide (Center) - 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

The synthetic peptide sequence is selected from aa 207-220 of Human GBP2

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GBP2 Blocking Peptide (Center) - 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.

GBP2 Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

GBP2 Blocking Peptide (Center) - Images**GBP2 Blocking Peptide (Center) - Background**

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

GBP2 Blocking Peptide (Center) - 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.