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# MICS1 / GHITM Antibody (internal region)

**Peptide-affinity purified goat antibody**
**Catalog # AF3095a**

## Specification

### MICS1 / GHITM Antibody (internal region) - Product Information

| | |
|---|---|
| Application | **WB** |
| Primary Accession | Q9H3K2 |
| Other Accession | NP_055209.2, 27069, 66092 (mouse), 290596 (rat) |
| Reactivity | **Human** |
| Predicted | **Mouse, Rat, Pig, Dog, Cow** |
| Host | **Goat** |
| Clonality | **Polyclonal** |
| Concentration | **0.5 mg/ml** |
| Isotype | **IgG** |
| Calculated MW | **37205** |

### MICS1 / GHITM Antibody (internal region) - Additional Information

**Gene ID** 27069

**Other Names**
Growth hormone-inducible transmembrane protein, Dermal papilla-derived protein 2, Mitochondrial morphology and cristae structure 1, MICS1, Transmembrane BAX inhibitor motif-containing protein 5, GHITM, DERP2, MICS1, TMBIM5

**Format**
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
MICS1 / GHITM Antibody (internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

### MICS1 / GHITM Antibody (internal region) - Protein Information

**Name** GHITM

**Synonyms** DERP2, MICS1, TMBIM5

**Function**
Plays an important role in maintenance of mitochondrial morphology and in mediating either calcium or potassium/proton antiport (PubMed:<a

href="http://www.uniprot.org/citations/18417609" target="_blank">18417609</a>, PubMed:<a href="http://www.uniprot.org/citations/36321428" target="_blank">36321428</a>, PubMed:<a href="http://www.uniprot.org/citations/32977469" target="_blank">32977469</a>, PubMed:<a href="http://www.uniprot.org/citations/35912435" target="_blank">35912435</a>). Mediates proton-dependent calcium efflux from mitochondrion (PubMed:<a href="http://www.uniprot.org/citations/36321428" target="_blank">36321428</a>, PubMed:<a href="http://www.uniprot.org/citations/35912435" target="_blank">35912435</a>). Functions also as an electroneutral mitochondrial proton/potassium exchanger (PubMed:<a href="http://www.uniprot.org/citations/36321428" target="_blank">36321428</a>). Required for the mitochondrial tubular network and cristae organization (PubMed:<a href="http://www.uniprot.org/citations/18417609" target="_blank">18417609</a>, PubMed:<a href="http://www.uniprot.org/citations/36321428" target="_blank">36321428</a>, PubMed:<a href="http://www.uniprot.org/citations/32977469" target="_blank">32977469</a>). Involved in apoptotic release of cytochrome c (PubMed:<a href="http://www.uniprot.org/citations/18417609" target="_blank">18417609</a>). Inhibits the proteolytic activity of AFG3L2, stimulating respiration and stabilizing respiratory enzymes in actively respiring mitochondria (PubMed:<a href="http://www.uniprot.org/citations/36321428" target="_blank">36321428</a>). However, when mitochondria become hyperpolarized, GHITM loses its inhibitory activity toward AFG3L2 and the now the active AFG3L2 turns first on GHITM and, if hyperpolarization persists, on other proteins of the mitochondria, leading to a broad remodeling of the mitochondrial proteome (PubMed:<a href="http://www.uniprot.org/citations/36321428" target="_blank">36321428</a>).

**Cellular Location**
Mitochondrion inner membrane; Multi-pass membrane protein

## MICS1 / GHITM Antibody (internal region) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## MICS1 / GHITM Antibody (internal region) - Images

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AF3095a (0.01 µg/ml) staining of Human Cerebellum (A), Duodenum (B) and Heart (C) cell lysates (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.




AF3095a (0.3 µg/ml) staining of HeLa cell lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

**MICS1 / GHITM Antibody (internal region) - References**

Comparative genomics and function analysis on BI1 family. Zhou J, Zhu T, Hu C, Li H, Chen G, Xu G, Wang S, Zhou J, Ma D, Computational biology and chemistry 2008 Jun 32 (3): 159-62. PMID: 18440869