

GIMAP5 (N-15): sc-164478

BACKGROUND

GIMAP5 (GTPase, IMAP family member 5), also known as IAN5 (immunity-associated nucleotide 5), IAN4L1 (immunity-associated nucleotide 4-like 1 protein), IAN4, IMAP3, HIMAP3 or IROD, is a 307 amino acid single-pass type IV membrane protein of the mitochondrial outer membrane. A member of the GTP-binding superfamily and to the immuno-associated nucleotide (IAN) subfamily, GIMAP5 plays a role in T-cell survival and mitochondrial integrity. GIMAP5 is highly expressed in CD4 and CD8-positive T-cells and monocytes, as well as B-lymphocyte-derived neoplasms. GIMAP5 exists as two alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 7q36.1. Defects in the GIMAP5 gene are associated with systemic lupus erythematosus.

REFERENCES

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2. Stamm, O., et al. 2002. Human ortholog to mouse gene *imap38* encoding an ER-localizable G-protein belongs to a gene family clustered on chromosome 7q32-36. *Gene* 282: 159-167.
3. Krücken, J., et al. 2004. Comparative analysis of the human *gimap* gene cluster encoding a novel GTPase family. *Gene* 341: 291-304.
4. Keita, M., et al. 2007. GIMAP5 regulates mitochondrial integrity from a distinct subcellular compartment. *Biochem. Biophys. Res. Commun.* 361: 481-486.
5. Dalberg, U., et al. 2007. Both *Gimap5* and the diabetogenic BBDP allele of *Gimap5* induce apoptosis in T cells. *Int. Immunol.* 19: 447-453.
6. Hellquist, A., et al. 2007. The human GIMAP5 gene has a common polyadenylation polymorphism increasing risk to systemic lupus erythematosus. *J. Med. Genet.* 44: 314-321.
7. Lim, M.K., et al. 2009. IAN5 polymorphisms are associated with systemic lupus erythematosus. *Lupus* 18: 1045-1052.
8. Chadwick, N., et al. 2010. Notch protection against apoptosis in T-ALL cells mediated by GIMAP5. *Blood Cells Mol. Dis.* 45: 201-209.
9. Barnes, M.J., et al. 2010. Loss of T cell and B cell quiescence precedes the onset of microbial flora-dependent wasting disease and intestinal inflammation in *Gimap5*-deficient mice. *J. Immunol.* 184: 3743-3754.

CHROMOSOMAL LOCATION

Genetic locus: GIMAP5 (human) mapping to 7q36.1.

SOURCE

GIMAP5 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of GIMAP5 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164478 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GIMAP5 (N-15) is recommended for detection of GIMAP5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other GIMAP family members.

Suitable for use as control antibody for GIMAP5 siRNA (h): sc-89711, GIMAP5 shRNA Plasmid (h): sc-89711-SH and GIMAP5 shRNA (h) Lentiviral Particles: sc-89711-V.

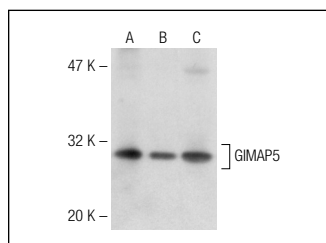
Molecular Weight of GIMAP5 isoforms: 35/40 kDa.

Positive Controls: LNCaP cell lysate: sc-2231, A-431 whole cell lysate: sc-2201 or Raji whole cell lysates.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GIMAP5 (N-15): sc-164478. Western blot analysis of GIMAP5 expression in LNCaP (A), A-431 (B) and Raji (C) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.