

GIMAP5 (E-11): sc-377307

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 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

- Dahéron, L., et al. 2001. Molecular cloning of IAN4: a Bcr/Abl-induced gene that encodes an outer membrane mitochondrial protein with GTP-binding activity. *Nucleic Acids Res.* 29: 1308-1316.
- 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.
- Krücken, J., et al. 2004. Comparative analysis of the human GIMAP gene cluster encoding a novel GTPase family. *Gene* 341: 291-304.
- Keita, M., et al. 2007. GIMAP5 regulates mitochondrial integrity from a distinct subcellular compartment. *Biochem. Biophys. Res. Commun.* 361: 481-486.
- Dalberg, U., et al. 2007. Both GIMAP5 and the diabetogenic BBDP allele of GIMAP5 induce apoptosis in T cells. *Int. Immunol.* 19: 447-453.
- 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.
- Lim, M.K., et al. 2009. IAN5 polymorphisms are associated with systemic lupus erythematosus. *Lupus* 18: 1045-1052.

CHROMOSOMAL LOCATION

Genetic locus: GIMAP5 (human) mapping to 7q36.1; *Gimap5* (mouse) mapping to 6 B2.3.

SOURCE

GIMAP5 (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 5-39 within an N-terminal cytoplasmic domain of GIMAP5 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377307 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GIMAP5 (E-11) is recommended for detection of GIMAP5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for GIMAP5 siRNA (h): sc-89711, GIMAP5 siRNA (m): sc-145401, GIMAP5 shRNA Plasmid (h): sc-89711-SH, GIMAP5 shRNA Plasmid (m): sc-145401-SH, GIMAP5 shRNA (h) Lentiviral Particles: sc-89711-V and GIMAP5 shRNA (m) Lentiviral Particles: sc-145401-V.

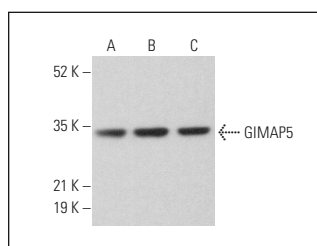
Molecular Weight of GIMAP5 isoforms: 35/40 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, Ramos cell lysate: sc-2216 or Raji whole cell lysate: sc-364236.

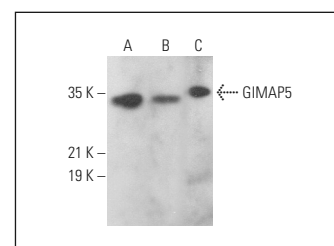
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GIMAP5 (E-11): sc-377307. Western blot analysis of GIMAP5 expression in BJAB (A), BYDP (B) and RAW 264.7 (C) whole cell lysates.



GIMAP5 (E-11): sc-377307. Western blot analysis of GIMAP5 expression in Raji (A) and Ramos (B) whole cell lysates and rat thymus tissue extract (C).

SELECT PRODUCT CITATIONS

- Dai, P., et al. 2021. *Gimap5* inhibits lung cancer growth by interacting with M6PR. *Front. Oncol.* 11: 699847.

STORAGE

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

RESEARCH USE

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