

# GIMAP4 (H-8): sc-515241

## BACKGROUND

The GTPase of the immunity-associated protein (GIMAP) family of proteins include seven members that are expressed by genes residing on human chromosome 7. GIMAP proteins have been implicated in the regulation of lymphomyeloid cell survival. GIMAP4 (GTPase IMAP family member 4), also known as IMAP4 (immunity-associated protein 4) and IAN1 (immunity-associated nucleotide 1 protein), is a 329 amino acid protein that contains five motifs that are conserved in GTP-binding proteins and a C-terminal coiled-coiled region that may be responsible for protein-protein interactions. GIMAP4 exhibits intrinsic GTPase activity that is highly dependent on magnesium concentration to bind GDP. Showing differential regulation during T-helper cell differentiation, GIMAP4 appears to regulate the apoptosis of T cells. GIMAP4 is specifically expressed in resting T and B lymphocytes and its protein expression is appreciably decreased upon T or B lymphocyte activation.

## REFERENCES

1. Cambot, M., et al. 2002. Human immune associated nucleotide 1: a member of a new guanosine triphosphatase family expressed in resting T and B cells. *Blood* 99: 3293-3301.
2. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608087. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Schnell, S., et al. 2006. GIMAP4 accelerates T-cell death. *Blood* 108: 591-599.
4. Taniwaki, M., et al. 2006. Gene expression profiles of small-cell lung cancers: molecular signatures of lung cancer. *Int. J. Oncol.* 29: 567-575.
5. Nitta, T., et al. 2006. IAN family critically regulates survival and development of T lymphocytes. *PLoS Biol.* 4: e103.
6. Carter, C., et al. 2007. A natural hypomorphic variant of the apoptosis regulator GIMAP4/IAN1. *J. Immunol.* 179: 1784-1795.
7. Shiao, Y.M., et al. 2008. Dysregulation of GIMAP genes in non-small cell lung cancer. *Lung Cancer* 62: 287-294.
8. Rutledge, E.A., et al. 2009. Sequence variation and expression of the Gimap gene family in the BB rat. *Exp. Diabetes Res.* 2009: 835650.
9. Filén, J.J., et al. 2009. Quantitative proteomics reveals GIMAP family proteins 1 and 4 to be differentially regulated during human T helper cell differentiation. *Mol. Cell. Proteomics* 8: 32-44.

## CHROMOSOMAL LOCATION

Genetic locus: GIMAP4 (human) mapping to 7q36.1.

## SOURCE

GIMAP4 (H-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 281-299 within an internal region of GIMAP4 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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-515241 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

GIMAP4 (H-8) is recommended for detection of GIMAP4 of 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 GIMAP4 siRNA (h): sc-89794, GIMAP4 shRNA Plasmid (h): sc-89794-SH and GIMAP4 shRNA (h) Lentiviral Particles: sc-89794-V.

Molecular Weight of GIMAP4: 38 kDa.

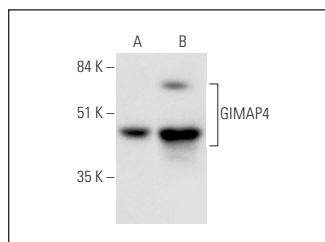
Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or HT-29 whole cell lysate: sc-364232.

## RECOMMENDED SUPPORT REAGENTS

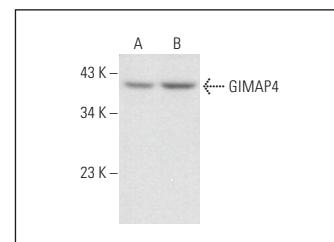
To ensure optimal results, the following support reagents are recommended:

- 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 A/G PLUS-Agarose: sc-2003 (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



GIMAP4 (H-8): sc-515241. Western blot analysis of GIMAP4 expression in Jurkat whole cell lysate (A) and human PBL tissue extract (B).



GIMAP4 (H-8): sc-515241. Western blot analysis of GIMAP4 expression in HT-29 (A) and CCRF-CEM (B) 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.