



GIMAP1 (D-14): sc-160371

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. GIMAP1 (GTPase, IMAP family member 1), also known as IMAP1 (immunity-associated protein 1), HIMAP1 or IMAP38, is a 306 amino acid single-pass type IV membrane protein of the endoplasmic reticulum (ER) belonging to the GIMAP family. Encoded by a gene located on human chromosome 7, GIMAP1 is expressed primarily in spleen with lower levels found in lymph node. Chromosome 7 houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Tsiouras, P., Myers, J.C., Ramirez, F. and Prockop, D.J. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
2. Iwasaki, S., Usami, S., Abe, S., Isoda, H., Watanabe, T. and Hoshino, T. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. *Arch. Otolaryngol. Head Neck Surg.* 127: 705-708.
3. Stamm, O., Krücken, J., Schmitt-Wrede, H.P., Benten, W.P. and Wunderlich, F. 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.
4. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608084. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Krücken, J., Schroetel, R.M., Müller, I.U., Saïdani, N., Marinovski, P., Benten, W.P., Stamm, O. and Wunderlich, F. 2004. Comparative analysis of the human *gimap* gene cluster encoding a novel GTPase family. *Gene* 341: 291-304.
6. Reiner, O., Sapoznik, S. and Sapir, T. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.
7. Saunders, A., Lamb, T., Pascall, J., Hutchings, A., Dion, C., Carter, C., Hepburn, L., Langhorne, J. and Butcher, G.W. 2009. Expression of GIMAP1, a GTPase of the immunity-associated protein family, is not up-regulated in malaria. *Malar. J.* 8: 53.
8. Filen, J.J., Filen, S., Moulder, R., Tuomela, S., Ahlfors, H., West, A., Kouvonen, P., Kantola, S., Björkman, M., Katajamaa, M., Rasool, O., Nyman, T.A. and Laheesmaa, R. 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.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: *Gimap1* (mouse) mapping to 6 B2.3.

SOURCE

GIMAP1 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of GIMAP1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-160371 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GIMAP1 (D-14) is recommended for detection of GIMAP1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 GIMAP1 siRNA (m): sc-145398, GIMAP1 shRNA Plasmid (m): sc-145398-SH and GIMAP1 shRNA (m) Lentiviral Particles: sc-145398-V.

Molecular Weight of GIMAP1: 34 kDa.

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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.