

TCIRG1 Antibody
Catalog # ASC11523**Specification****TCIRG1 Antibody - Product Information**

Application	WB
Primary Accession	Q13488
Other Accession	NP_006010 , 19924145
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	91 kDa KDa
Application Notes	TCIRG1 antibody can be used for detection of TCIRG1 by Western blot at 0.5 µg/mL.

TCIRG1 Antibody - Additional InformationGene ID **10312****Target/Specificity**

TCIRG1; At least two alternatively spliced isoforms are known to exist; this antibody will only detect the larger isoform.

Reconstitution & Storage

TCIRG1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions

TCIRG1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TCIRG1 Antibody - Protein Information**Name** TCIRG1**Synonyms** ATP6N1C, ATP6V0A3**Function**

Subunit of the V0 complex of vacuolar(H⁺)-ATPase (V-ATPase), a multisubunit enzyme composed of a peripheral complex (V1) that hydrolyzes ATP and a membrane integral complex (V0) that translocates protons (By similarity). V-ATPase is responsible for acidifying and maintaining the pH of intracellular compartments and in some cell types, is targeted to the plasma membrane, where it is responsible for acidifying the extracellular environment (By similarity). Seems to be directly involved in T-cell activation (PubMed:10329006).

Cellular Location

Membrane; Multi-pass membrane protein

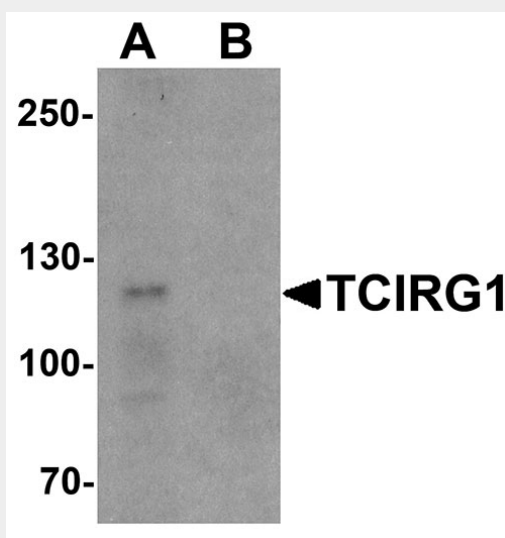
Tissue Location

Isoform long is highly expressed in osteoclastomas. Isoform short is highly expressed in thymus

TCIRG1 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

TCIRG1 Antibody - Images

Western blot analysis of TCIRG1 in EL4 cell lysate with TCIRG1 antibody at 0.5 μ g/ml in (A) the absence and (B) the presence of blocking peptide.

TCIRG1 Antibody - Background

TCIRG1 Antibody: The T-cell immune regulator 1 (TCIRG1) is the α 3 subunit of the vacuolar-type proton transporting ATPase (V-ATPase), a proton pump in late endosomes and lysosomes that functions in the luminal acidification of these organelles. Genetic defects in the gene encoding this protein are responsible for a severe form of autosomal recessive osteopetrosis, a condition that leads to increased bone density, decreased bone strength, and inflammation in bone tissues. TCIRG1 is also required for the normal secretion of insulin and the bacteria-killing function of macrophages.

TCIRG1 Antibody - References

Toyomura T, Oka T, Yamaguchi C, et al. Three subunit α isoforms of mouse vacuolar H⁺-ATPase. Preferential expression of the α 3 isoform during osteoclast differentiation. *J. Biol. Chem.* 2000; 275:8760-5

Kornak U, Schulz A, Friedrich W, et al. Mutations in the α 3 subunit of the vacuolar H⁺-ATPase cause malignant osteopetrosis. *Hum. Mol. Genet.* 2000; 9:2059-63.

Sun-Wada GH, Toyomura T, Kawamura N, et al. The $\alpha 3$ isoform of V-ATPase regulates insulin secretion from pancreatic β -cells. J. Cell Sci. 2006; 119:4531-40.

Sun-Wada GH, Tabata H, Kawamura N, et al. Direct recruitment of H^+ -ATPase from lysosomes for phagocytic acidification. J. Cell Sci. 2009; 122:2504-13.