

TCIRG1 Antibody

Catalog # ASC11523

Product Information

Application	WB, E
Primary Accession	Q13488
Other Accession	NP_006010 , 19924145
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	92968
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TCIRG1 antibody can be used for detection of TCIRG1 by Western blot at 0.5 μ g/mL.

Additional Information

Gene ID	10312
Other Names	V-type proton ATPase 116 kDa subunit a isoform 3, V-ATPase 116 kDa isoform a3, Osteoclastic proton pump 116 kDa subunit, OC-116 kDa, OC116, T-cell immune regulator 1, T-cell immune response cDNA7 protein, TIRC7, Vacuolar proton translocating ATPase 116 kDa subunit a isoform 3, TCIRG1, ATP6N1C, ATP6V0A3
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.

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

Background

TCIRG1 Antibody: The T-cell immune regulator 1 (TCIRG1) is the $\alpha 3$ 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.

References

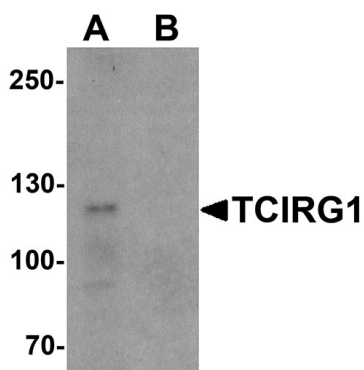
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Kornak U, Schulz A, Friedrich W, et al. Mutations in the $\alpha 3$ subunit of the vacuolar H⁺-ATPase cause malignant osteopetrosis. *Hum. Mol. Genet.* 2000; 9:2059-63.

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.

Images



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