SANTA CRUZ BIOTECHNOLOGY, INC.

TCIRG1 (N-13): sc-162300

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TCIRG1 (T cell, immune regulator 1, ATPase, H^+ transporting, lysosomal V_0 subunit A3), also known as V-type proton ATPase 116 kDa subunit a isoform 3, T cell immune response cDNA7 protein (TIRC7), a3, Vph1, Stv1, Atp6i, osteoclastic proton pump 116 kDa subunit (OC116), OPTB1, ATP6N1 or ATP6V0A3, is an 830 amino acid multi-pass membrane protein belonging to the V-ATPase 116 kDa subunit family. Functioning as a component of the proton channel of V-ATPases, TCIRG1 is likely involved in T cell activation and exists as two alternatively spliced isoforms termed isoform long and isoform short, which are expressed in osteoclasts and thymus, respectively. TCIRG1 gene mutations are associated with a rare genetic disease known as osteopetrosis autosomal recessive type 1 (OPTB1), which is characterized by abnormally dense bone that forms as a result of defective resorption of immature bone.

CHROMOSOMAL LOCATION

Genetic locus: TCIRG1 (human) mapping to 11q13.2; Tcirg1 (mouse) mapping to 19 A.

SOURCE

TCIRG1 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of TCIRG1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-162300 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

TCIRG1 (N-13) is recommended for detection of TCIRG1 long isoform of human origin and TCIRG1 of mouse and rat origin of mouse by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TCIRG1 (N-13) is also recommended for detection of TCIRG1 long isoform in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TCIRG1 siRNA (h): sc-96928, TCIRG1 siRNA (m): sc-154139, TCIRG1 shRNA Plasmid (h): sc-96928-SH, TCIRG1 shRNA Plasmid (m): sc-154139-SH, TCIRG1 shRNA (h) Lentiviral Particles: sc-96928-V and TCIRG1 shRNA (m) Lentiviral Particles: sc-154139-V.

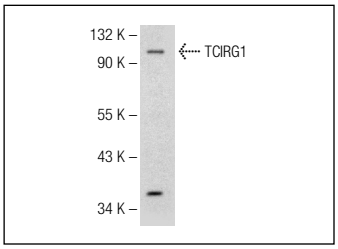
Molecular Weight of TCIRG1 long/short isoforms: 93/69 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

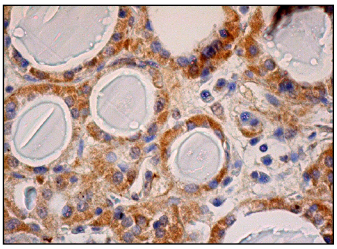
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



TCIRG1 (N-13): sc-162300. Western blot analysis of TCIRG1 expression in HeLa whole cell lysate.



TCIRG1 (N-13): sc-162300. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells.

STORAGE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **TCIRG1 (6H3): sc-293491**, our highly recommended monoclonal alternative to TCIRG1 (N-13).