

ACP2 (C-14): sc-109181

BACKGROUND

ACP2 (acid phosphatase 2), also known as LAP (lysosomal acid phosphatase), is a 423 amino acid member of the histidine acid phosphatase family. Localized to the lysosomal compartment, ACP2 is comprised of two subunits, designated α and β , which function to hydrolyze orthophosphoric monoesters to alcohols and phosphates. ACP2 is expressed throughout the body and exerts optimal enzymatic activity when the lysosome is at an acidic pH. Defects in the gene encoding ACP2 are the cause of acid phosphatase deficiency, a condition characterized by terminal bleeding, opisthotonos, hypotonia, lethargy, intermittent vomiting and death in early infancy.

REFERENCES

1. Pohlmann, R., et al. 1988. Human lysosomal acid phosphatase: cloning, expression and chromosomal assignment. *EMBO J.* 7: 2343-2350.
2. Geier, C., et al. 1989. Structure of the human lysosomal acid phosphatase gene. *Eur. J. Biochem.* 183: 611-616.
3. Whitelock, R.B., et al. 1997. Cathepsin G, acid phosphatase, and α 1-proteinase inhibitor messenger RNA levels in keratoconus corneas. *Invest. Ophthalmol. Vis. Sci.* 38: 529-534.
4. Branco, M. and Ferrand, N. 1998. Genetic polymorphism of rabbit (*Oryctolagus cuniculus*) tissue acid phosphatases (ACP2 and ACP3). *Comp. Biochem. Physiol. B, Biochem. Mol. Biol.* 120: 405-409.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 171650. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Mannan, A.U., et al. 2004. Mutation in the gene encoding lysosomal acid phosphatase (ACP2) causes cerebellum and skin malformation in mouse. *Neurogenetics* 5: 229-238.

CHROMOSOMAL LOCATION

Genetic locus: ACP2 (human) mapping to 11p11.2; Acp2 (mouse) mapping to 2 E1.

SOURCE

ACP2 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ACP2 of human 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-109181 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

ACP2 (C-14) is recommended for detection of ACP2 of mouse, rat and human 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 ACP family members.

ACP2 (C-14) is also recommended for detection of ACP2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ACP2 siRNA (h): sc-96327, ACP2 siRNA (m): sc-140821, ACP2 shRNA Plasmid (h): sc-96327-SH, ACP2 shRNA Plasmid (m): sc-140821-SH, ACP2 shRNA (h) Lentiviral Particles: sc-96327-V and ACP2 shRNA (m) Lentiviral Particles: sc-140821-V.

Molecular Weight of ACP2: 45-80 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) 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.

PROTOCOLS

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



Try **ACP2 (B-7): sc-390667** or **ACP2 (4B5): sc-100344**, our highly recommended monoclonal alternatives to ACP2 (C-14).