

ACP2 (B-7): sc-390667

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

- Pohlmann, R., et al. 1988. Human lysosomal acid phosphatase: cloning, expression and chromosomal assignment. *EMBO J.* 7: 2343-2350.
- Geier, C., et al. 1989. Structure of the human lysosomal acid phosphatase gene. *Eur. J. Biochem.* 183: 611-616.
- 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.
- 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.
- 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/>
- 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.

SOURCE

ACP2 (B-7) is a mouse monoclonal antibody raised against amino acids 151-256 mapping within an internal region of ACP2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACP2 (B-7) is available conjugated to agarose (sc-390667 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390667 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390667 PE), fluorescein (sc-390667 FITC), Alexa Fluor® 488 (sc-390667 AF488), Alexa Fluor® 546 (sc-390667 AF546), Alexa Fluor® 594 (sc-390667 AF594) or Alexa Fluor® 647 (sc-390667 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390667 AF680) or Alexa Fluor® 790 (sc-390667 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ACP2 (B-7) is recommended for detection of ACP2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

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

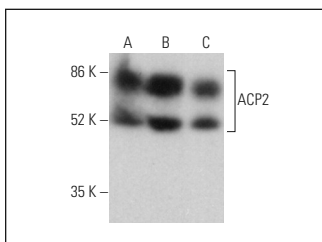
Molecular Weight of ACP2: 45-80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Caki-1 cell lysate: sc-2224 or ACHN whole cell lysate: sc-364365.

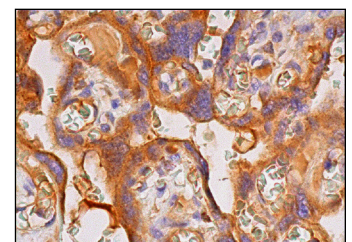
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ACP2 (B-7): sc-390667. Western blot analysis of ACP2 expression in HeLa (A), Caki-1 (B) and ACHN (C) whole cell lysates.



ACP2 (B-7): sc-390667. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

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.