

ALPPL2 (9-YD35): sc-134255

BACKGROUND

ALPPL2 (alkaline phosphatase, placental-like 2), also known as ALPG, GCAP or ALPPL, is a 532 amino acid protein that is lipid-anchored to the cell membrane and belongs to the alkaline phosphatase family. Expressed at low levels in thymus and testis, ALPPL2 functions as a homodimer that uses magnesium and zinc as cofactors to catalyze the conversion of a phosphate monoester to an alcohol and a free phosphate. ALPPL2 is overexpressed in germ cell tumors, suggesting a role in tumor development and progression. The gene encoding ALPPL2 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin ichthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

1. Millán, J.L., et al. 1982. A possible new locus of alkaline phosphatase expressed in human testis. *Hum. Genet.* 62: 293-295.
2. Jemmerson, R., et al. 1985. Characterization of the placental alkaline phosphatase-like (Nagao) isozyme on the surface of A431 human epidermoid carcinoma cells. *Cancer Res.* 45: 282-287.
3. Millán, J.L. 1986. Molecular cloning and sequence analysis of human placental alkaline phosphatase. *J. Biol. Chem.* 261: 3112-3115.
4. Martin, D., et al. 1987. The human placental alkaline phosphatase gene and related sequences map to chromosome 2 band q37. *Ann. Hum. Genet.* 51: 145-152.
5. Shen, L.P., et al. 1988. 5' nucleotide sequence of a putative human placental alkaline phosphatase-like gene. *Nucleic Acids Res.* 16: 5694.
6. Hamilton-Dutoit, S.J., et al. 1990. The expression of placental alkaline phosphatase (PLAP) and PLAP-like enzymes in normal and neoplastic human tissues. An immunohistological survey using monoclonal antibodies. *APMIS* 98: 797-811.
7. Hoylaerts, M.F. and Millán, J.L. 1991. Site-directed mutagenesis and epitope-mapped monoclonal antibodies define a catalytically important conformational difference between human placental and germ cell alkaline phosphatase. *Eur. J. Biochem.* 202: 605-616.

CHROMOSOMAL LOCATION

Genetic locus: ALPPL2 (human) mapping to 2q37.1.

SOURCE

ALPPL2 (9-YD35) is a mouse monoclonal antibody raised against recombinant ALPPL2 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ALPPL2 (9-YD35) is recommended for detection of ALPPL2 of human origin 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).

Suitable for use as control antibody for ALPPL2 siRNA (h): sc-105390, ALPPL2 shRNA Plasmid (h): sc-105390-SH and ALPPL2 shRNA (h) Lentiviral Particles: sc-105390-V.

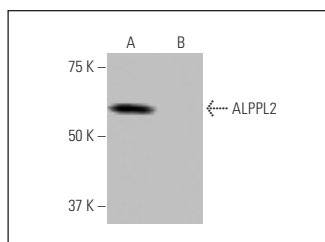
Molecular Weight of ALPPL2: 57 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or human ALPPL2 transfected 293T whole cell lysate.

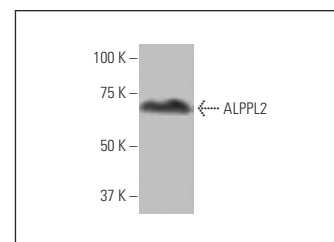
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ALPPL2 (9-YD35): sc-134255. Western blot analysis of ALPPL2 expression in human ALPPL2 transfected (A) and non-transfected (B) 293T whole cell lysates.



ALPPL2 (9-YD35): sc-134255. Western blot analysis of ALPPL2 expression in A-431 whole cell lysate.

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.