SANTA CRUZ BIOTECHNOLOGY, INC.

Alkaline Phosphatase (L-19): sc-15065

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Alkaline Phosphatases (AP) are glycosyl-phosphatidylinositol (GPI)-anchored, dimeric, Zn^{2+}-metallated glycoproteins that catalyze the hydrolysis of phosphomonoesters into an inorganic phosphate and an alcohol. Placental Alkaline Phosphatase (also known as PLAP, ALPP, PALP, placental ALP-1 or Regan isozyme) is a 530 amino acid, tissue-specific AP that is expressed in the placenta, the serum of pregnant women and ectopically expressed in various cancers, including those of the ovary and testis. PLAP may assist in guiding migratory cells and transporting specific molecules, such as fatty acids and immunoglobulins, across the plasma membrane. The three tissue-specific APs identified in human, PLAP, germ cell AP (GCAP) and intestinal AP, are 90-98% homologous and their genes are clustered on chromosome 2q37.1.

CHROMOSOMAL LOCATIONS

Genetic locus: ALPP/ALPPL2/ALPI (human) mapping to 2q37.1; Akp3/Alppl2 (mouse) mapping to 1 D.

SOURCE

Alkaline Phosphatase (L-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLAP 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-15065 P, (100 µg 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

Alkaline Phosphatase (L-19) is recommended for detection of PLAP, ALPPL2 and IAP of human origin and Akp-3 and, to a lesser extent, Akp-5 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Alkaline Phosphatase (L-19) is also recommended for detection of PLAP, ALPPL2 and IAP in additional species, including bovine and porcine.

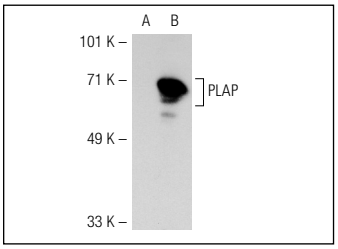
Molecular Weight of Alkaline Phosphatase: 70 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, PLAP (h): 293T Lysate: sc-113546 or JAR cell lysate: sc-2276.

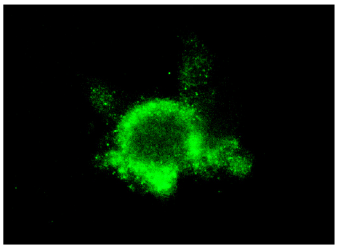
RECOMMENDED SECONDARY REAGENTS

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.

DATA



Alkaline Phosphatase (L-19): sc-15065. Western blot analysis of Alkaline Phosphatase expression in non-transfected: sc-117752 (**A**) and human PLAP transfected: sc-113546 (**B**) 293T whole cell lysates.



Alkaline Phosphatase (L-19): sc-15065. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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7. Smith, E.R., et al. 2013. Fetuin-A-containing calciprotein particles reduce mineral stress in the macrophage. PLoS ONE 8: e60904.
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