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Polyclonal Antibody to Alkaline phosphatase - HRP

Alternate names: JW0374, b0383, phoA

Catalog No.: AP05001HR-N

Quantity: 0.5 mg

Concentration: 10.0 mg/ml

Background: Alkaline phosphatase (ALP) removes phosphate groups from the 5' end of DNA and RNA, and from proteins, at high pH. Most mammals have 4 different isozymes: placental, placental like, intestinal and non tissue specific (found in liver, kidney and bone). Tissues with particularly high concentrations of ALP include the liver, bile ducts, placenta, and bone. Damaged or diseased tissue releases enzymes into the blood, so serum ALP measurements can be abnormal in many conditions, including bone disease and liver disease.

Uniprot ID: P00634

NCBI: AP_001034.1

GeneID: 945041

Host: Rabbit

Immunogen: Full length *E. coli* Alkaline Phosphatase

Format:
State: Liquid purified Ig fraction
Purification: Ion Exchange Chromatography
Buffer System: PBS, pH 7.2 containing 0.01% Gentamicin Sulphate as preservative and 1% BSA as stabilizer.
Label: HRP

Applications:
ELISA (1/3000-1/15000).
Western blot.
Immunofluorescence.
Immunohistochemistry on Frozen Sections.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody detects bacterial Alkaline Phosphatase (BAP), a periplasmic enzyme which catalyzes the release of 5'- and 3'-phosphate groups from DNA, RNA and nucleotides. BAP can also dephosphorylate a number of proteins and alkaloids, and has an optimum pH of 8.0. BAP is encoded by the phoA gene, and forms a homodimer of two identical 47kD subunits.
It is thought that bacteria use BAP to create free phosphate groups for uptake and use. Other functions include dephosphorylating extracellular organic compounds for import into the cell.
Species: Bacteria. Does not work with Mammals.
Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Bradshaw RA, Cancedda F, Ericsson LH, Neumann PA, Piccoli SP, Schlesinger MJ, et al. Amino acid sequence of Escherichia coli alkaline phosphatase. Proc Natl Acad Sci U S A. 1981 Jun;78(6):3473-7. PubMed PMID: 7022451.
2. Wyckoff HW. (1987) Structure of Escherichia coli alkaline phosphatase determined by X-ray diffraction. Phosphate Metabolism and Cellular Regulation in Microorganisms. Edited by: Torriani – Gorini, A., Rothman, FG., Silver, S., Wright, A. and Yagil, E. America Society for Microbiology, Washington, DC. pp. 118–126.
3. Akiyama Y, Ito K. Folding and assembly of bacterial alkaline phosphatase in vitro and in vivo. J Biol Chem. 1993 Apr 15;268(11):8146-50. PubMed PMID: 8463326.