10320 Camino Santa Fe, Suite G
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Phospho1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54888

Specification

Phospho1 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, ICC, E**
Primary Accession	Q8TCT1
Reactivity	**Rat, Pig, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**30 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human Phospho1**
Epitope Specificity	**201-267/267**
Isotype	**IgG**

Purity
affinity purified by Protein A

Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SIMILARITY	**Belongs to the HAD-like hydrolase superfamily. PHOSPHO family.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
PHOSPHO1 is a 267 amino acid phosphatase that is a member of the haloacid dehalogenase (HAD) superfamily of magnesium-dependent hydrolases. PHOSPHO1 is highly expressed in bone and cartilage and localizes to the osteoid layer of the periosteum. PHOSPHO1 is restricted to sites of mineralization and its inhibition decreases the ability of matrix vesicles to calcify in bone, suggesting that the protein may play a role in the matrix mineralization process during skeletal development. PHOSPHO1 cleaves phosphoethanolamine and phosphocholine to generate inorganic phosphate for bone mineralization. PHOSPHO1 contains three catalytic motifs that are conserved within the haloacid dehalogenase superfamily.

Phospho1 Polyclonal Antibody - Additional Information

Gene ID 162466

Other Names
Phosphoethanolamine/phosphocholine phosphatase, 3.1.3.75, PHOSPHO1

Target/Specificity
Expressed at sites of mineralization in bone and cartilage. Highly expressed in osteoblast cell line SaOS-2 which produces a mineralized matrix, but not in MG-63 cell line, which do not mineralize.

Dilution

WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>ICC~~N/A<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

Phospho1 Polyclonal Antibody - Protein Information

Name PHOSPHO1 {ECO:0000303|PubMed:12464021, ECO:0000312|HGNC:HGNC:16815}

Function
Phosphatase that has a high activity toward phosphoethanolamine (PEA) and phosphocholine (PCho) (PubMed:15175005). Involved in the generation of inorganic phosphate for bone mineralization (By similarity). Acts in a non-redundant manner with PHOSPHO1 in skeletal mineralization: while PHOSPHO1 mediates the initiation of hydroxyapatite crystallization in the matrix vesicles (MVs), ALPL/TNAP catalyzes the spread of hydroxyapatite crystallization in the extracellular matrix (By similarity).

Cellular Location
Extracellular vesicle {ECO:0000250|UniProtKB:Q8R2H9}. Note=Localizes to special class of extracellular vesicles, named matrix vesicles (MVs), which are released by osteogenic cells. {ECO:0000250|UniProtKB:Q8R2H9}

Tissue Location
Expressed at sites of mineralization in bone and cartilage. Highly expressed in osteoblast cell line SaOS-2 which produces a mineralized matrix, but not in MG-63 cell line, which do not mineralize.

Phospho1 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho1 Polyclonal Antibody - Images

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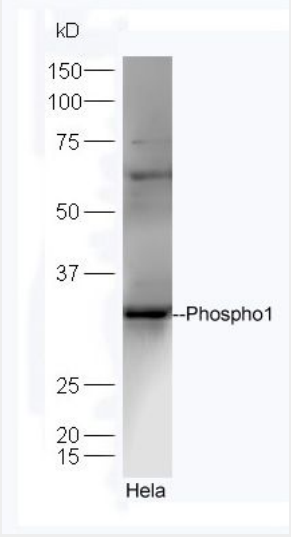
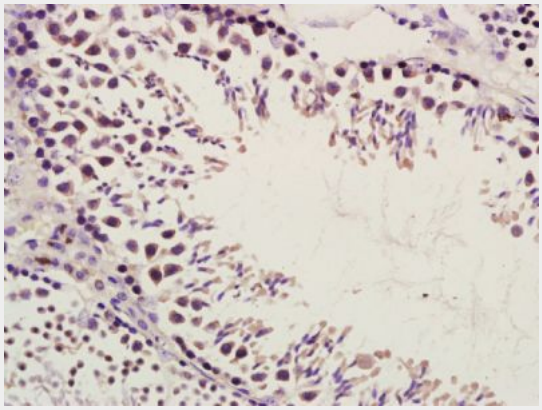


Sample: Hela Cell (Human) Lysate at 40 ug
Primary: Anti-Phospho1 (bs-12562R) at 1/300 dilution
Secondary: HRP conjugated Goat-Anti-rabbit IgG (bs-0295G-HRP) at 1/5000 dilution
Predicted band size: 30 kD
Observed band size: 30 kD



Paraformaldehyde-fixed, paraffin embedded (Mouse testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Phospho1) Polyclonal Antibody, Unconjugated (bs-12562R) at 1:500 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.

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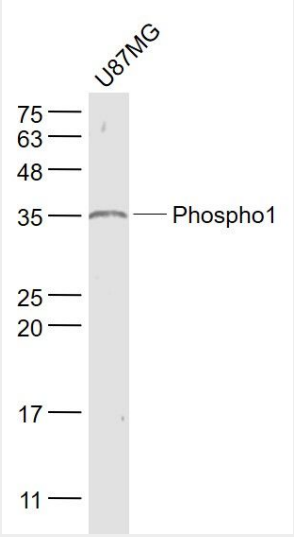

Sample:
U87MG(Human) Cell Lysate at 30 ug
Primary: Anti- Phospho1 (bs-12562R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 30 kD
Observed band size: 35 kD