

# Human Phosphoserine phosphatase/PSPH antibody

Catalog Number: AHP0705

## PRODUCT INFORMATION

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**Catalog number**

AHP0705

**Clone No.**

3G12

**Product type**

Monoclonal Antibody

**UnitProt No.**

P78330

**NCBI Accession No.**

NP\_004568

**Alternative Names**

PSPH, PSPase, PSP, Phosphoserine phosphatase Human, Phosphoserine phosphatase deficiency, Phosphoserine phosphatase, O-phosphoserine phosphohydrolase, L-3-phosphoserine phosphatase, EC 3.1.3.3

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

Human

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant human PSP (1-225aa) purified from E. coli

**Isotype**

IgG1 kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB, ICC/IF

**Usage**

The antibody has been tested by ELISA, Western blot and ICC/IF analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

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## Storage

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

### Description

Human phosphoserine phosphatase (HPSP), specific for D- and L- phosphoserine, has been identified in all human tissues. HPSP is a Mg (2+) -dependent phosphoserine phosphatase. The three dimensional structure of HPSP reveals the structural and functional role of the divalent cation in the active site of phosphatases. In particular, the complex structures reveal that the open-closed environmental change of the active site, generated by local rearrangement of the alpha-helical bundle domain, is important for the substrate recognition and hydrolysis.

### General References

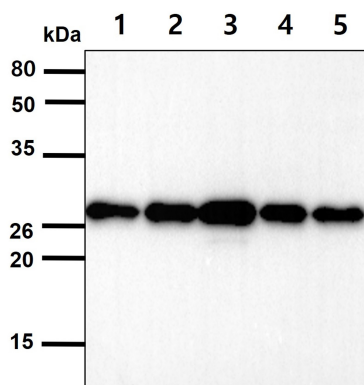
Moro-Furlani, et al., (1980) Ann Hum Genet 43(4):323-3233.

Kim HY, et al., (2002) J Biol Chem 277(48):46651-46658.

Peeraer Y, et al., (2004) Eur J Biochem 271(16):3421-3427.

## DATA

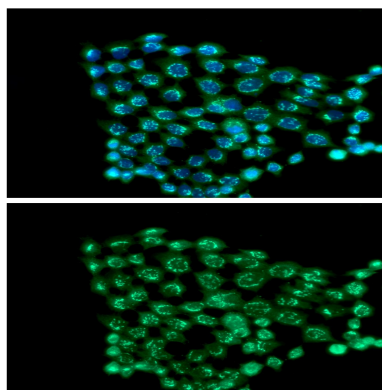
### Western blot analysis (WB)



The cell lysates(40ug) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human PSP antibody (1:500). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1.: Jurkat cell lysate  
Lane 2.: K562 cell lysate  
Lane 3.: HepG2 cell lysate  
Lane 4.: A549 cell lysate  
Lane 5.: MCF7 cell lysate

### Immunocytochemistry/Immunofluorescence (ICC/IF)



ICC/IF analysis of PSP in A431 cells. The cell was stained with AHP0705 (1:100). The secondary antibody (green) was used Alexa Fluor 488. DAPI was stained the cell nucleus (blue).