

**PHPT1 Blocking Peptide (Y113)****Synthetic peptide****Catalog # BP2721e****Specification****PHPT1 Blocking Peptide (Y113) - Product Information****Primary Accession**[Q9NRX4](#)**PHPT1 Blocking Peptide (Y113) - Additional Information****Gene ID** 29085**Other Names**

14 kDa phosphohistidine phosphatase, 313-, Phosphohistidine phosphatase 1, Protein janus-A homolog, PHPT1, PHP14

**Target/Specificity**

The synthetic peptide sequence is selected from aa 107-125 of HUMAN PHPT1

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**PHPT1 Blocking Peptide (Y113) - Protein Information****Name** PHPT1**Synonyms** PHP14**Function**

Exhibits phosphohistidine phosphatase activity.

**Cellular Location**

Cytoplasm.

**Tissue Location**

Expressed abundantly in heart and skeletal muscle.

**PHPT1 Blocking Peptide (Y113) - Protocols**

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

- [Blocking Peptides](#)

#### **PHPT1 Blocking Peptide (Y113) - Images**

#### **PHPT1 Blocking Peptide (Y113) - Background**

Phosphorylation of receptors by protein kinases is a process that can be reversed by a group of enzymes called protein phosphatases. Coordinated control of kinases and phosphatases provides the cell with the capacity to rapidly switch between phosphorylated and dephosphorylated protein states in dynamic response to environmental stimuli. Activation of critical enzymes by kinase phosphorylation alone is not enough to provide adequate regulation ?it is the combination with phosphatase dephosphorylation that effectively creates on/off switches to control cellular events. Errors in control, either through kinases or their counterpart phosphatases, can lead to unchecked cell growth attributable to human cancers and developmental disorders. Potential mechanisms to control dephosphorylation include changes in the expression of protein phosphatases, their subcellular localization, phosphorylation of phosphatase catalytic and regulatory subunits and regulation by endogenous phosphatase inhibitors. Most protein phosphatases are not stringently specific for their substrates. Consequently, changes in phosphatase activity may have a broad impact on dephosphorylation and turnover of phosphoproteins that are substrates for different kinases. This may be an important point of control to connect cellular circuitry of interrelated signaling pathways, and to synchronize physiological responses.

#### **PHPT1 Blocking Peptide (Y113) - References**

Ikuta, S., et al., J. Gastroenterol. 29(6):727-732 (1994).  
Arimura, Y., et al., Tumour Biol. 13(3):180-186 (1992).  
Yang, Q., et al., Proc. Natl. Acad. Sci. U.S.A. 88(14):5949-5953 (1991).