



Recombinant Protein Technical Manual

Recombinant Human PHPT1/PHP14 Protein (His Tag)
RPES2698

Product Data:

Product SKU: RPES2698

Size: 50µg

Species: Human

Expression host: E. coli

Uniprot: Q9NRX4

Protein Information:

Molecular Mass: 15.2 kDa

AP Molecular Mass: 15.2 kDa

Tag: N-His

Bio-activity:

Purity: > 97 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: CGI-202;HEL-S32P;HSPC141;PHP14

Immunogen Information:

Sequence: Ala 2-Tyr 125

Background:

PHPT1, also known as 14 kDa phosphohistidine phosphatase, phosphohistidine phosphatase 1, protein janus-A homolog, PHP14, is a cytoplasm protein which belongs to the janus family. PHPT1 / PHP14 is expressed abundantly in heart and skeletal muscle. Phosphatases are a diverse group of enzymes that regulate numerous cellular processes. Much of what is known relates to the tyrosine, threonine, and serine phosphatases, whereas the histidine phosphatases have not been studied as much. Protein histidine phosphorylation exists widely in vertebrates, and it plays important roles in signal transduction and other cellular functions. Protein histidine phosphorylation accounts for about 6% of the total protein phosphorylation in eukaryotic cells. The knowledge about eukaryotic PHPT (protein histidine phosphatase) is still very limited. To date, only one vertebrate PHPT has been discovered, and two crystal structures of human PHPT1 have been solved. PHPT1 / PHP14 can dephosphorylate a variety of proteins (e. g. ATP-citrate lyase and the beta-subunit of G proteins). A putative active site has been identified by its electrostatic character, ion binding, and conserved protein residues.