

## PPP1R14A Protein, Human, Recombinant (His)

### General Information

Synonyms:	17 kDa PKC-Potentiated Inhibitory Protein of PP1;CPI17;PPP1R14A;Protein Phosphatase 1 Regulatory Subunit 14A;PPP1INL;CPI-17;Protein Kinase C-Potentiated Inhibitor Protein of 17 kDa
Protein Construction:	Met1-Pro147
Species:	Human
Expression Host:	E. coli
Accession:	Q96A00
Molecular Weight:	23-26 KDa (reducing condition)
AA Sequence:	Met1-Pro147

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 0.2 mM EDTA, 1 mM DTT, 10% Glycerol, pH 8.0.

### Preparation and Storage

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

Protein Phosphatase 1 Regulatory Subunit 14A (PPP1R14A) belongs to the PP1 inhibitor family. PPP1R14A is mapped to chromosome 19q13.13-q13.2. PPP1R14A binds directly to protein kinase C and casein kinase I. Meantime, PPP1R14A is a phosphorylation-dependent inhibitor of smooth muscle myosin phosphatase. PPP1R14A is the inhibitor of PPP1CA. When phosphorylated, PPP1R14A has over 1000-fold higher inhibitory activity, creating a molecular switch for regulating the phosphorylation status of PPP1CA substrates and smooth muscle contraction. In addition, inhibition of PPP1R14A also enhances contraction of smooth muscle in the absence of increment of intracellular Ca<sup>2+</sup> concentration.

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