

PTPN12 Protein, Human, Recombinant (aa 1-355, His & GST)

General Information

Synonyms:	PTPG1;protein tyrosine phosphatase, non-receptor type 12;PTP-PEST
Protein Construction:	A DNA sequence encoding the human PTPN12 (AAA36529.1) (Met1-Gln355) was expressed with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	AAA36529.1
Molecular Weight:	69.4 kDa (predicted); 64 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by its ability to dephosphorylate a phosphotyrosine residue in an EGF receptor 988-998 phosphopeptide substrate. The specific activity is > 15 μ moles/min/mg.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing 20 mM Tris, 500 mM NaCl, 10% gly, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

PTPN12 is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. PTPN12 contains a C-terminal PEST motif, which serves as a protein-protein interaction domain, and may be related to protein intracellular half-life. PTPN12 was found to bind and dephosphorylate the product

of oncogene c-ABL, thus may play a role in oncogenesis. PTPN12 was shown to interact with, and dephosphorylate, various cytoskeleton and cell adhesion molecules, such as p13 (Cas), CAKbeta/PTK2B, PSTPIP1, and paxillin, which suggested its regulatory roles in controlling cell shape and mobility.

Reference

Garton AJ. et al., 1997, Oncogene. 15 (8): 877-85.

Lin Yi. et al., 2003, Am J Physiol Heart Circ. 285 (2): H710-21.

Takekawa M. et al., 1994, FEBS Lett. 339 (3): 222-8.

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