



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax 800-325-5052 • (314) 286-3828
email: sigma-techserv@sial.com
Internet: <http://www.sigma.sial.com>

Product Information

Protein Phosphatase Inhibitor-2

Rabbit Recombinant, Expressed in *E. coli*

Product Number **P8218**

Storage Temperature -20°C

Synonyms: I-2, ATP-Mg dependent phosphatase regulatory subunit, protein phosphatase 1I (PP-1I) is a 1:1 complex of I-2 and PP-1C.

Product Description

Lyophilized powder containing approximately 15% protein; balance Tris buffer salts, pH 7, EDTA and Leupeptin

Protein phosphatase inhibitor-2 (I-2), a specific inhibitor of protein phosphatase 1 (PP-1), is a regulatory subunit of the cytosolic PP-1. Activation of I-2 can be achieved by phosphorylation on Thr-72 by glycogen synthase kinase 3 (GSK-3).^{1,2} This activation is increased by casein kinase 2 phosphorylation by a synergistic mechanism.³ Rabbit muscle I-2 is a 204 amino acid, heat stable protein with a molecular weight of 22.8 KD. The apparent molecular weight by SDS-PAGE is 31 KD.¹ It inhibits PP-1 activity at nanomolar concentrations.^{1,4} The protein phosphatase inhibitor-2 was cloned and expressed in *E. coli* to yield an active protein.

Preparation Instructions

Reconstitution of 1 bottle (100 µg) with 200 µl of deionized water will result in a solution containing 20 mM Tris, pH 7, 1 mM EDTA, 2 µg/ml Leupeptin and greater than 0.5 mg/ml protein.

Storage/Stability

Store desiccated at -20°C. Ship at ambient temperature. After reconstitution the protein can be stored at -20°C for at least 60 days.

References

1. Cohen, P, Annu. Rev. Biochem., 58, 453 (1989).
2. Plyte, S., *et al.*, Biochem. Biophys. Acta, 1114, 147 (1992).
3. DePaoli-Roach, A., J. Biol. Chem., 259, 12144 (1984).
4. Cohen, P., *et al.*, Meth. Enzym., 159, 427 (1988).
5. Park, I-K, *et al.*, J. Biol. Chem., 269, 944 (1994).

MAM 2/05/99

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.