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Product Information

Protein Phosphatase Inhibitor-2
rabbit, recombinant
expressed in *E. coli*

Product Number **P 8218**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

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

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 Thr⁷² 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 kDa. The apparent molecular weight (SDS-PAGE) is 31 kDa.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.

The product is supplied as a lyophilized powder containing approximately 15% protein with the balance Tris buffer salts, pH 7, EDTA, and leupeptin.

Precautions and Disclaimer

This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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 $\mu\text{g/ml}$ leupeptin, and greater than 0.5 mg/ml protein.

Storage/Stability

It is recommended to store the product desiccated at $-20\text{ }^{\circ}\text{C}$. Shipment is at ambient temperature. After reconstitution the protein can be stored at $-20\text{ }^{\circ}\text{C}$ 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).

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