Product Information

Phosphatase Inhibitor Cocktail 2

Aqueous solution

P5726

Product Description

Crude cell extracts contain various endogenous enzymes, such as proteases and phosphatases, which can modify proteins present in the extract. The best way to improve the yield of native proteins is to add inhibitors of these enzymes known to be present in the source material.

This phosphatase inhibitor cocktail has been optimized and tested for tyrosine protein phosphatases, acid and alkaline phosphatases. The individual components of this proprietary formulation have specific inhibitory properties. A description of each inhibitor is given below:

- Sodium orthovanadate: inhibits several ATPases, protein tyrosine phosphatases, and other phosphate-transferring enzymes[1]
- Sodium molybdate: inhibits acid and phosphoprotein phosphatases[2]
- Sodium tartrate: inhibits acid phosphatases[3]
- Imidazole: inhibits alkaline phosphatases[4]

Several dissertations[5-18] have cited use of product P5726 in their protocols.

Product

P5726 is supplied as a clear aqueous solution. P5726 has been sterile-filtered through a 0.2 µm membrane and the bottles are aseptically filled.

Storage/Stability

P5726 is shipped on cooler packs ("wet ice"). It is recommended to store P5726 at 2-8 °C. P5726 is stable for two years as supplied. Dark coloration may develop upon storage, which does not affect activity.

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Usage

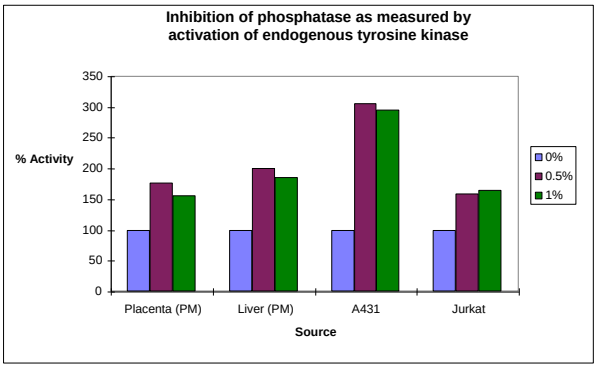
One mL will inhibit phosphatase activities found in the 100,000 × *g* supernatant from human placenta, bovine liver, rabbit muscle, A431, or Jurkat cell extracts at a protein concentration of ~5 mg/mL.

One mL of cocktail solution is used to prepare 100 mL of supernatant that contains a maximum of 500 mg of protein. Thus, 1 mL of cocktail solution should be added per 500 mg of protein extracted from the tissue in use, or 1 mL of cocktail solution per 100 mL of extraction buffer.

This product has been tested on cell extracts from various animal tissues:

- Cytosolic and TRITON™ X-100 extracts of bovine liver and human placenta
- Cytosolic extract of rabbit muscle
- TRITON™ X-100 extracts of A431 and Jurkat cells

P5726 was found to inhibit phosphatase activities as measured with *p*-nitrophenyl phosphate (pNPP) at pH 7.5, and tyrosine protein phosphatase activity as measured by dephosphorylation of ^{32}P-Tyr-myelin basic protein at pH 7.6.



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