

**Sodium  
Orthovanadate  
(Vanadate)**



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P0758S 008141117111

**P0758S**

**1 ml**      **Lot: 0081411**      **Exp: 11/17**  
**100 mM**      **Store at -20°C**

**Description:** Sodium Orthovanadate (Vanadate,  $\text{Na}_3\text{VO}_4$ ) is a commonly used general inhibitor for protein phosphotyrosyl phosphatases (PTPs). It is a competitive inhibitor. The inhibition by Vanadate is completely reversible upon the addition of EDTA or by dilution. Vanadate is activated for maximal inhibition of PTPs following the procedure described by J.A. Gordon (1).

The PTP activities are conveniently separable from the protein phosphoseryl and

phosphothreonyl phosphatase (PSP) activities inhibited by Fluoride (NEB# P0759) and EDTA. Routinely Vanadate is used to preserve the protein tyrosyl phosphorylation state in cells, cell lysates, and protein tyrosine kinase assays (1, 2).

Supplied in: Sterile purified water adjusted to pH 10.0 (1,2).

**Molecular Weight:** 183.9 daltons

**Purity:** >90% pure

**Suggested Working Concentration:** 1–10 mM

**Notes on Use:** Common buffer components such as EDTA and reducing agents may interact with Vanadate, affecting its potency (2).

100% of inhibition of TC PTP (NEB #P0752) is found when NEBuffer for PTP (NEB #B0760S) is supplemented with 5 mM Vanadate. There is no inhibition of the same PTP in the presence of 50 mM Fluoride under the same condition (3).

**References:**

1. Gordon, J.A. (1991) *Methods in Enzymology* 201, 477-482.
2. Huyer, G. et al. (1997) *J. Biol. Chem.* 272, 843-851.
3. Barshevsky, T. unpublished results.

CERTIFICATE OF ANALYSIS

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