

Sodium orthovanadate

Alkaline phosphatase inhibitor

Potent inhibitor of alkaline phosphatase and tyrosine phosphates. Regarding decavanadate: across the pH range of 1-13, simple aqueous solutions of $[\text{VO}_4]^{3-}$ ion involve a dozen or more ionic species, both monomeric and oligomeric, whose abundances depend strongly on pH and $[\text{VO}_4]^{3-}$ concentration. At pH 3.75 a stable complex can be prepared (see below in Fohr et al.) which contains ten vanadium atoms and hence is a decavanadate ion. When diluted to pH 7.2, the decavanadate species has a half-life time of about 2 hours. Fohr et al., also provide directions for generating control solutions of mixed vanadate complexes in which decavanadate is absent and monomeric orthovanadate is present. Decavanadate inhibits inositol 1,4,5-trisphosphate- (IP_3) induced calcium release from permeabilized endocrine cells and the binding of $[\text{}^3\text{H}]\text{IP}_3$ to its receptor in cerebellar and adrenal cortical membranes.

Citations: 8

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Ordering Information

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ALX-400-032-G005	5g
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Manuals, SDS & CofA

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Handling & Storage

Use/Stability As indicated on product label or CoA when stored as recommended.

Long Term Storage Ambient

Shipping Ambient Temperature

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name Sodium vanadate

Appearance White to off-white.

CAS 13721-39-6

Couple Target Alkaline phosphatase, PTP

Couple Type Inhibitor

Formula Na_3VO_4

MW 183.9

Purity $\geq 90\%$ (dry basis titration)

RTECS YW1120000

Solubility Soluble in water (100mg/ml).

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