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DATASHEET

bpV(pic)

Product overview

Name	bpV(pic)
Cat No	HB0147
Biological action	Inhibitor
Purity	>90%
Description	Potent PTP inhibitor

Biological Data

Biological description	Potent protein phosphotyrosine phosphatase (PTP) inhibitor (IC ₅₀ values are 12.7 and 61 μM for PTP-β and PTP-1B respectively). Also inhibits phosphatase and tensin homologue (PTEN) (IC ₅₀ = 31 nM) and activates insulin-receptor kinase (IRK). Displays cardioprotective and insulin-mimetic properties.
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Solubility & Handling

Storage instructions	+4 °C
Solubility overview	Soluble in water or DMSO
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	Dipotassium bisperoxo (picolinato)oxovanadate (V)
Molecular Weight	367.28
Chemical structure	The chemical structure shows a central vanadium atom (V) double-bonded to one oxygen and single-bonded to two peroxo groups (O2) and one picolinate group (a pyridine ring with a carboxylate group). The picolinate group is shown as a pyridine ring with a carboxylate group (COO-) at the 2-position. The vanadium atom is also coordinated to two potassium ions (K+).
Molecular Formula	K ₂ [VO(O ₂) ₂ C ₆ H ₄ NO ₂].2H ₂ O
CAS Number	148556-27-8
PubChem identifier	16760324
SMILES	C1=CC=NC(=C1)C(=O)[O-].O.O.[OH-].OO.OO.[K+].[K+].[V]

References

Peroxovanadium compounds. A new class of potent phosphotyrosine phosphatase inhibitors which are insulin mimetics.

Posner BI *et al* (1994) J Biol Chem 269(6)

PubMedID [8308031](#)

Bisperoxovanadium compounds are potent PTEN inhibitors.

Schmid AC *et al* (2004) FEBS Lett 566(1-3)

PubMedID [15147864](#)

Early signaling events triggered by peroxovanadium [bpV(phen)] are insulin receptor kinase (IRK)-dependent: specificity of inhibition of IRK-associated protein tyrosine phosphatase(s) by bpV(phen).

Band CJ *et al* (1997) Mol Endocrinol 11(13)

PubMedID [9415395](#)

Effects of bpV(pic) and bpV(phen) on H9c2 cardiomyoblasts during both hypoxia/reoxygenation and H₂O₂-induced injuries.

Tian Y *et al* (2012) Mol Med Rep 5(3)

PubMedID [22200881](#)
