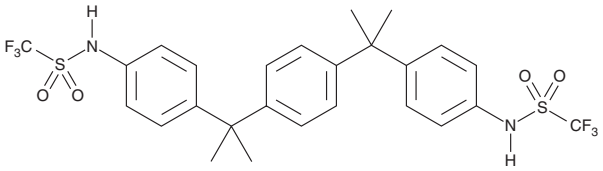
PRODUCT INFORMATION

PTP Inhibitor IV

Item No. 18458

CAS Registry No.:	329317-98-8
Formal Name:	N,N'-[1,4-phenylenebis[(1-methylethylidene)-4,1-phenylene]]bis[1,1,1-trifluoro-methanesulfonamide
Synonym:	Protein Tyrosine Phosphatase Inhibitor IV
MF:	$C_{26}H_{26}F_6N_2O_4S_2$
FW:	608.6
Purity:	≥98%
UV/Vis.:	λ_{max}: λ_{max}: 229 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PTP inhibitor IV is supplied as a crystalline solid. A stock solution may be made by dissolving the PTP inhibitor IV in the solvent of choice, which should be purged with an inert gas. PTP inhibitor IV is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PTP inhibitor IV in ethanol and DMSO is approximately 25 mg/ml and approximately 30 mg/ml in DMF.

PTP inhibitor IV is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PTP inhibitor IV should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PTP inhibitor IV has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Protein tyrosine phosphatases (PTPs) remove phosphate from tyrosine residues of cellular proteins. Reversible phosphorylation catalyzed by the coordinated actions of protein tyrosine kinases and phosphatases is key to the regulation of the signaling events that control cell growth and proliferation, differentiation, and survival or apoptosis, as well as adhesion and motility. PTP inhibitor IV is an uncharged, 1,4-di-substituted, phenyl-linked *bis*-trifluoromethylsulfonamido phosphate mimetic that acts as a reversible, competitive, and active-site directed inhibitor of SHP-2, PTP1B, PTP-ε, PTP-Meg-2, PTP-σ, PTP-β, and PTP-μ (IC_{50}s = 1.8, 2.5, 8.4, 13, 20, 6.4, and 6.7 μM, respectively).[1]

Reference

1. Huang, P., Ramphal, J., Wei, J., *et al*. Structure-based design and discovery of novel inhibitors of protein tyrosine phosphatases. *Bioor. Med. Chem.* **11**, 1835-1849 (2003).

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