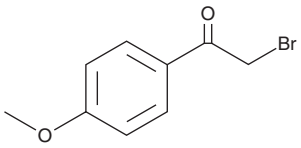
PRODUCT INFORMATION

PTP Inhibitor II

Item No. 20629

CAS Registry No.: 2632-13-5
Formal Name: 2-bromo-1-(4-methoxyphenyl)-ethanone
Synonyms: α-Bromo-4'-methoxyacetophenone, ω-Bromo-4'-methoxyacetophenone, 4-(Bromoacetyl)anisole, 4-Methoxyphenacyl bromide, NSC 129010, Protein Tyrosine Phosphatase Inhibitor II
MF: $C_9H_9BrO_2$
FW: 229.1
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 285 nm
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



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

Laboratory Procedures

PTP inhibitor II is supplied as a crystalline solid. A stock solution may be made by dissolving the PTP inhibitor II in the solvent of choice, which should be purged with an inert gas. PTP inhibitor II is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PTP inhibitor II in these solvents is approximately 20 mg/ml.

PTP inhibitor II is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PTP inhibitor II should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. PTP inhibitor II has a solubility of approximately 0.09 mg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PTP inhibitor II is a cell-permeable protein tyrosine phosphatase (PTP) inhibitor that covalently binds the catalytic domain of the Src homology region 2 domain-containing phosphatase (SHP-1(ΔSH2)).[1] PTP inhibitor II binds with lower affinity than PTP Inhibitor I (Item No. 19766) with K_i values of 128 and 43 µM, respectively.[1] SHP-1 has known roles in regulating insulin signaling as well as myeloid and lymphoid cell differentiation, making inhibitors of these phosphatases of interest in diabetes, cancer, allergy, and inflammation research.[2]

References

1. Arabaci, G., Guo, X.C., Beebe, K.D., *et al.* αHaloacetophenone derivatives as photoreversible covalent inhibitors of protein tyrosine phosphatases. *Journal of the American Chemical Society* **121(21)**, 5085-5086 (1999).
2. Heneberg, P. Use of protein tyrosine phosphatase inhibitors as promising targeted therapeutic drugs. *Curr. Med. Chem.* **16(6)**, 706-733 (2009).

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