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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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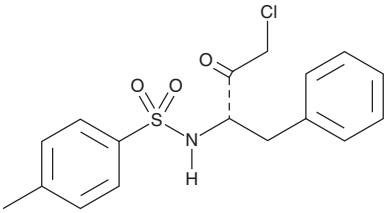
PRODUCT INFORMATION

Tosyl Phenylalanyl Chloromethyl Ketone

Item No. 20166

CAS Registry No.: 402-71-1
Formal Name: N-[(1S)-3-chloro-2-oxo-1-(phenylmethyl)propyl]-4-methyl-benzenesulfonamide
Synonyms: N^{α}-Tosyl-L-Phenylalanine Chloromethyl Ketone, TPCK
MF: $C_{17}H_{18}ClNO_3S$
FW: 351.8
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Tosyl Phenylalanyl Chloromethyl Ketone (TPCK) is supplied as a crystalline solid. A stock solution may be made by dissolving the TPCK in the solvent of choice. TPCK is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of TPCK in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

TPCK is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TPCK should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. TPCK has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

TPCK is an irreversible inhibitor of chymotrypsin-like proteases that has been shown to affect cell proliferation, apoptosis, and tumorigenesis.[1] It can disrupt PDK1 signaling to the AGC kinases, Akt, S6K1, and RSK, as well as MSK1 and MSK2.[2] TPCK also inhibits superoxide production and suppresses neutrophil respiratory burst.[3]

References

1. Blair, T.T. and Marini, M.A. A reexamination of the reaction of TPCK with α-chymotrypsin. *FEBS Lett.* **20(1)**, 41-43 (1972).
2. Anjum, R., Pae, E., Blenis, J., *et al.* TPCK inhibits AGC kinases by direct activation loop adduction at phenylalanine-directed cysteine residues. *FEBS Lett.* **586(19)**, 3471-3476 (2012).
3. Gillibert, M., Dehry, Z., Terrier, M., *et al.* Another biological effect of tosylphenylalanylchloromethane (TPCK): It prevents p47phox phosphorylation and translocation upon neutrophil stimulation. *Biochem J.* **386(Pt 3)** 549-556 (2005).

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