PRODUCT INFORMATION



Tosyllysine Chloromethyl Ketone (hydrochloride)

Item No. 13074

CAS Registry No.: Formal Name:	4272-74-6 N-[5-amino-1-(2-chloroacetyl)pentyl]-	
	4-methyl-benzenesulfonamide, monohydrochloride	\searrow
Synonyms:	1-Chloro-3-Toxylamide-7-Amino-L-2-	
	Heptanone, TLCK	
MF:	$C_{14}H_{21}CIN_2O_3S \bullet HCI$	S HCI
FW:	369.3	0 0
Purity:	≥95%	
UV/Vis.:	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

Tosyllysine chloromethyl ketone (TLCK) (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the TLCK (hydrochloride) in the solvent of choice, which should be purged with an inert gas. TLCK (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of TLCK (hydrochloride) in these solvents is approximately 5 and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of TLCK (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of TLCK (hydrochloride) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TLCK is an active site-directed agent that inhibits serine proteinases with trypsin-like activity. TLCK may also act non-selectively with thiol groups and thereby inhibit cysteine proteinases and other enzymes.¹ To prevent proteolytic degradation, TLCK may be used in protein purification protocols.² TLCK selectively inactiviates clostripain obtained from C. histolyticum.³

References

- 1. Griscavage, J.M., Wilk, S., and Ignarro, L.J. Serine and cysteine proteinase inhibitors prevent nitric oxide production by activated macrophages by interfering with transcription of the inducible NO synthase gene. Biochem. Biophys. Res. Commun. 215(2), 721-729 (1995).
- 2. Urban, M.K., Franklin, S.G., and Zweidler, A. Isolation and characterization of the histone variants in chicken erythrocytes. Biochemistry 18(18), 3952-3960 (1979).
- 3. Józwiak, J., Komar, A., Jankowska, E., et al. Inhibition of Clostridium histolyticum supernatant cytotoxic activity by protease inhibitors. Enzyme Microb. Technol. 39(1), 28-31 (2006).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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