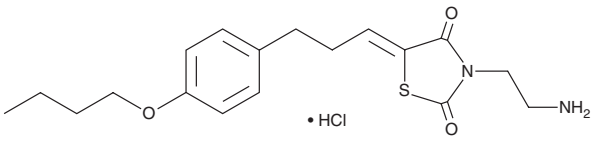
PRODUCT INFORMATION

K145 (hydrochloride)

Item No. 11691

CAS Registry No.:	1449240-68-9
Formal Name:	3-(2-aminoethyl)-5Z-[3-(4-butoxyphenyl)propylidene]-2,4-thiazolidinedione, monohydrochloride
MF:	$C_{18}H_{24}N_2O_3S \bullet HCl$
FW:	384.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 226, 280 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

K145 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the K145 (hydrochloride) in the solvent of choice. K145 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of K145 (hydrochloride) in these solvents is approximately 10 mg/ml.

K145 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, K145 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. K145 (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

K145 is a selective inhibitor of sphingosine kinase 2 (SPHK2; K_i = 6.4 µM) with IC_{50} values of 4.3 and >10 µM for human recombinant SPHK2 and SPHK1, respectively.[1] It inhibits SPHK2, but not SPHK1, activity in U937 cells when used at a concentration of 10 µM. *In vivo*, K145 (15 mg/kg, i.p.) inhibits tumor growth in a U937 mouse xenograft model. It also improves glucose tolerance and regulates gluconeogenesis by stimulating insulin-dependent Akt/FoxO1 signaling in a mouse model of insulin resistance induced by dexamethasone (Item No. 11015) when administered at a dose of 30 mg/kg.[2]

References

1. Liu, K., Guo, T.L., Hait, N.C., *et al.* Biological characterization of 3-(2-amino-ethyl)-5-[3-(4-butoxyl-phenyl)-propylidene]-thiazolidine-2,4-dione (K145) as a selective sphingosine kinase-2 inhibitor and anticancer agent. *PLoS One* **8(2)**, e56471 (2013).
2. Shi, Y., Qiao, J., Mu, B., *et al.* 3-(2-amino-ethyl)-5-[3-(4-butoxyl-phenyl)-propylidene]-thiazolidine-2,4-dione (K145) ameliorated dexamethasone induced hepatic gluconeogenesis through activation of Akt/FoxO1 pathway. *Biochem. Biophys. Res. Commun.* (2017).

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