

PRODUCT INFORMATION



LY333531 (hydrochloride)

Item No. 13964

CAS Registry No.: 169939-93-9

Formal Name: (9S)-[(dimethylamino)methyl]-6,7,10,11-tetrahydro-9H,18H-5,21:12,17-dimethenodibenzo[e,k]pyrrolo[3,4-h][1,4,13]oxadiazacyclohexadecine-18,20(19H)-dione, monohydrochloride

Synonym: Ruboxistaurin

MF: $C_{28}H_{28}N_4O_3 \cdot HCl$

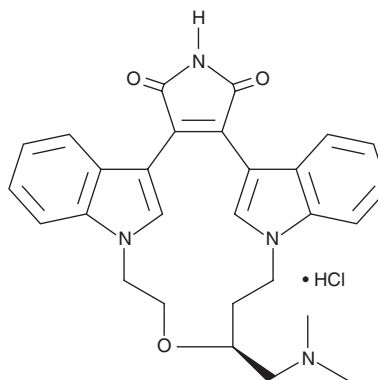
FW: 505.0

Purity: $\geq 98\%$

Supplied as: A crystalline solid

Storage: $-20^\circ C$

Stability: ≥ 4 years



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

Laboratory Procedures

LY333531 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the LY333531 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. LY333531 (hydrochloride) is soluble in the organic solvent DMSO at a concentration of 10 mg/ml.

Description

LY333531 is an inhibitor of PKC β (IC_{50} s = 4.7 and 5.9 nM for PKC β 1 and PKC β 2, respectively).¹ It is selective for PKC β 1 and PKC β 2 over PKC α , γ , δ , ϵ , ζ , and η (IC_{50} s = 360, 300, 250, >100,000, and 52 nM, respectively). LY333531 also inhibits glycogen synthase kinase 3 β (GSK3 β ; IC_{50} = 39.4 nM).² It inhibits neutrophil extracellular trap (NET) formation induced by phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) in primary human neutrophils when used at a concentration of 1 μ M.³ LY333531 increases the mechanical nociceptive threshold in a rat model of diabetic hyperalgesia induced by streptozotocin (STZ; Item No. 13104).⁴

References

1. Jirousek, M.R., Gillig, J.R., Gonzalez, C.M., et al. (S)-13-[(Dimethylamino)methyl]-10,11,14,15-tetrahydro-4,9:16,21-dimetheno-1H,13H-dibenzo[e,k]pyrrolo[3,4-h][1,4,13]oxadiazacyclohexadecene-1,3(2H)-dione (LY333531) and related analogues: Isozyme selective inhibitors of protein kinase C β . *J. Med. Chem.* **39**(14), 2664-2671 (1996).
2. Gray, R.D., Lucas, C.D., MacKellar, A., et al. Activation of conventional protein kinase C (PKC) is critical in the generation of human neutrophil extracellular traps. *J. Inflamm. (Lond)* **10**(1), 12 (2013).
3. Vignaux, P.A., Minerali, E., Foil, D.H., et al. Machine learning for discovery of GSK3 β inhibitors. *ACS Omega* **5**(41), 26551-26561 (2020).
4. Kim, H., Sasaki, T., Maeda, K., et al. Protein kinase C β selective inhibitor LY333531 attenuates diabetic hyperalgesia through ameliorating cGMP level of dorsal root ganglion neurons. *Diabetes* **52**(8), 2102-2109 (2019).

WARNING

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

SAFETY 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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