

Product Information

K252a from *Nonomuraea longicatena*

Catalog Number **K1639**

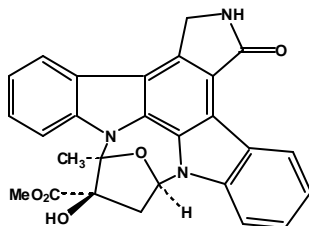
Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN: 99533-80-9

Product Description

Molecular Weight: 467.47

Molecular formula: $\text{C}_{27}\text{H}_{21}\text{N}_3\text{O}_5$



K252a is a potent inhibitor of various protein kinases including Protein kinase A, Protein kinase C and Protein kinase G.¹ It acts by competition with the ATP binding site with K_i values of 18-25 nM.¹ K252a also acts as a specific and potent inhibitor ($\text{IC}_{50} = 3\text{ nM}$) of Trk receptors and thus selectively blocks the effects of nerve growth factor (NGF) on PC12 cells.^{2,3} At lower concentrations, K252a can act as a neuroprotective compound, promoting survival of primary neuronal cultures.^{5,6} This alkaloid induces apoptosis and cell cycle arrest by inhibiting Cdc2 and Cdc25.⁴ Recently, K252a was found to improve psoriasis in a SCID mouse-human skin model⁷ and to suppress referred mechanical hypersensitivity and neuropeptide up-regulation associated with acute pancreatitis.⁸

Precautions and Disclaimer This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

K252a is soluble in DMSO (1 mg/ml) and in DMF (1 mg/ml), and insoluble in water.

Storage/Stability

The product is stable for 2 years if stored unopened at $-20\text{ }^{\circ}\text{C}$. A solution at 1 mg/ml in DMSO is stable for 3 months at $-20\text{ }^{\circ}\text{C}$.

References

1. Kase, H., et al., *Biochem. Biophys. Res. Commun.*, **142**, 436-440 (1987).
2. Knusel, B., and Hefti, F., *J. Neurochem.*, **59**, 1987-1996 (1992).
3. Koizumi, S., et al., *J. Neurosci.*, **8**, 715-721 (1988).
4. Chin, L.S., et al., *Cancer Invest.*, **17**, 391-395 (1999).
5. Knight, E., et al., *Biochem. Biophys. Res. Commun.*, **15**, 511-518 (1995).
6. Glicksman, M.A., et al., *J. Neurochem.*, **64**, 1502-1512 (1995).
7. Raychaudhuri, S.P., et al., *J. Invest. Dermatol.*, **122**, 812-819 (2004).
8. Winston, J.H., et al., *J. Pain.*, **4**, 329-337 (2003).

SP,AH,PHC 07/05-1

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