# PRODUCT INFORMATION

## K252b

*Item No. 11339*

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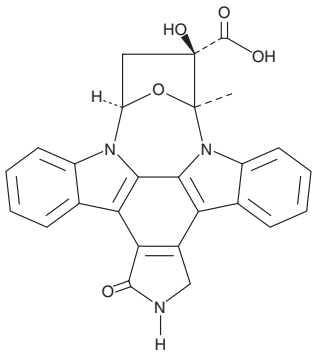
|---|---|
| **CAS Registry No.:** | 99570-78-2 |
| **Formal Name:** | (9S,10R,12R)-2,3,9,10,11,12-hexahydro-10-hydroxy-9-methyl-1-oxo-9,12-epoxy-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid |
| **MF:** | $C_{26}H_{19}N_3O_5$ |
| **FW:** | 453.5 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 231, 250, 291, 336, 351 368 nm |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥2 years |




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

### Laboratory Procedures

K252b is supplied as a crystalline solid. A stock solution may be made by dissolving the K252b in the solvent of choice, which should be purged with an inert gas. K252b is soluble in the organic solvent methanol at a concentration of approximately 2 mg/ml.

### Description

K252b is an indolocarbazole isolated from the actinomycete *Nocardiopsis*, first described as an inhibitor of protein kinase C.[1] However, as this compound does not freely pass through the cell membrane, it is used to inhibit extracellular kinases (ectokinases) of cells in culture.[2,3] K252b inhibits receptor-mediated degranulation from basophil-like RBL-2H3 cells ($IC_{50}$ = 0.5 µg/ml) and human basophils.[4] This extracellular inhibitor is also used in comparison studies with the closely related, cell-permeable inhibitor K252a, particularly in studies of neuronal differentiation.[5,6]

### References


1. Yasuzawa, T., Iida, T., Yoshida, M., *et al.* The structures of the novel protein kinase C inhibitors K-252a, b, c AND d. *J. Antibiot. (Tokyo)* **39(8)**, 1072-1078 (1986).
2. Plomp, J.J. and Molenaar, P.C. Involvement of protein kinases in the upregulation of acetylcholine release at endplates of α-bungarotoxin-treated rats. *J. Physiol.* **493(Pt 1)**, 175-186 (1996).
3. Zhu, X., Luo, C., Ferrier, J.M., *et al.* Evidence of ectokinase-mediated phosphorylation of osteopontin and bone sialoprotein by osteoblasts during bone formation *in vitro*. *Biochem. J.* **323(Pt 3)**, 637-643 (1997).
4. Teshima, R., Saito, Y., Ikebuchi, H., *et al.* Effect of an ectokinase inhibitor, K252b, on degranulation and $Ca^{2+}$ signals of RBL-2H3 cells and human basophils. *J. Immunol.* **159(2)**, 964-969 (1997).
5. Thompson, A.F. and Levin, L.A. Neuronal differentiation by analogs of staurosporine. *Neurochem. Int.* **56(4)**, 554-560 (2010).
6. Kawamura, N., Kawamura, K., Manabe, M., *et al.* Inhibition of brain-derived neurotrophic factor/tyrosine kinase B signaling suppresses choriocarcinoma cell growth. *Endocrinology* **151(7)**, 3006-3014 (2010).





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