

# PRODUCT INFORMATION



**KT 5823**

Item No. 10010965

**CAS Registry No.:** 126643-37-6  
**Formal Name:** 2,3,9,10,11,12-hexahydro-10R-methoxy-2,9-dimethyl-1-oxo-9S,12R-epoxy-1H-diiindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-i][1,6]benzodiazocine-10-carboxylic acid, methyl ester

**MF:** C<sub>29</sub>H<sub>25</sub>N<sub>3</sub>O<sub>5</sub>

**FW:** 495.5

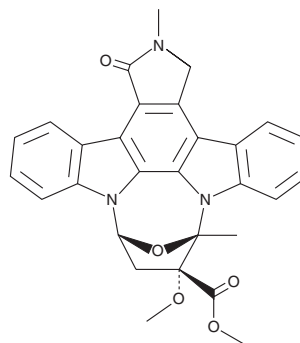
**Purity:** ≥95%

**UV/Vis.:** λ<sub>max</sub>: 292 nm

**Supplied as:** A 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

KT 5823 is supplied as a solid. A stock solution may be made by dissolving the KT 5823 in the solvent of choice, which should be purged with an inert gas. KT 5823 is soluble in organic solvents such as ethyl acetate and DMSO. The solubility of KT 5823 in these solvents is approximately 1 and 20 mg/ml, respectively.

## Description

The activity of cGMP-dependent protein kinase (PKG) is controlled by factors that elevate cellular cGMP, like nitric oxide (NO), and by those that reduce cGMP levels, like certain phosphodiesterases. KT 5823 is a potent, selective inhibitor of cGMP-dependent protein kinase (PKG) (*in vitro* IC<sub>50</sub> = 234 nM).<sup>1</sup> KT 5823 is cell-permeable and is often used in intact cells to assess the role of PKG in signaling, although there are cases where it poorly inhibits PKG in cells.<sup>2</sup> KT 5823 is a weak inhibitor of PKC (K<sub>i</sub> = 4 μM) and PKA (K<sub>i</sub> >10 μM).<sup>1</sup>

## References

1. Hidaka, H. and Kobayashi, R. Pharmacology of protein kinase inhibitors. *Annu. Rev. Pharmacol. Toxicol.* **32**, 377-397 (1992).
2. Burkhardt, M., Glazova, M., Gambaryan, S., *et al.* KT5823 inhibits cGMP-dependent protein kinase activity *in vitro* but not in intact human platelets and rat mesangial cells. *J. Biol. Chem.* **275(43)**, 33536-33541 (2000).

### 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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