Small Molecules

Gö6983

PKC inhibitor

Catalog # 72462

1 mg

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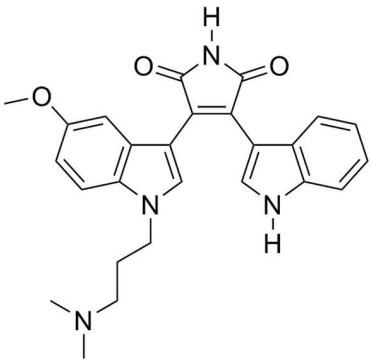
Product Description

Gö6983 inhibits several isoforms of protein kinase C (PKC; IC_{50} = 7, 7, 6, 10, 60, and 20,000 nM for PKCα, PKCβ, PKCγ, PKCδ, PKCζ, and PKCμ, respectively; Gschwendt et al.).

Molecular Name:	Gö6983
Alternative Names:	Gö 6983
CAS Number:	133053-19-7
Chemical Formula:	$C_{26}H_{26}N_4O_3$
Molecular Weight:	442.5 g/mol
Purity:	≥ 98%
Chemical Name:	3-[1-[3-(dimethylamino)propyl]-5-methoxy-1H-indol-3-yl]-4-(1H-indol-3-yl)-1H-pyrrole-2,5-dione
Structure:	

Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect from prolonged exposure to light. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMSO ≤ 20 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 226 µL of fresh DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

MAINTENANCE AND SELF-RENEWAL
· Inhibits differentiation and maintains pluripotency in mouse embryonic stem cells (Dutta et al.).
· Enhances human ground state pluripotent stem cell viability and growth (Gafni et al.).
· Inhibits proliferation of human primary fetal bone cells (Krattinger et al.).
· Inhibits the formatin of proplatelets from megakaryocytes derived from adult mouse bone marrow (Williams et al.).
REPROGRAMMING
· Enhances reprogramming of mouse embryonic fibroblasts to induced pluripotent stem cells (Dutta et al.).
· Direct lineage reprogramming of fibroblasts to mature neurons, in combination with CHIR99021 (Catalog #72052), RepSox (Catalog #73792), Forskolin (Catalog #72112), SP600125 (Catalog #72642), Valproic Acid (Catalog #72292), and Y-27632 (Catalog #72302) (Hu et al.).

References

Dutta D et al. (2011) Self-renewal versus lineage commitment of embryonic stem cells: protein kinase C signaling shifts the balance. Stem Cells 29(4): 618–28.
Gafni O et al. (2013) Derivation of novel human ground state naive pluripotent stem cells. Nature 504(7479): 282–6.
Gschwendt M et al. (1996) Inhibition of protein kinase C μ by various inhibitors. Inhibition from protein kinase c isoenzymes. FEBS Lett 392(2): 77–80.
Hu W et al. (2015) Direct conversion of normal and Alzheimer's Disease human fibroblasts into neuronal cells by small molecules. Cell Stem Cell 17(2): 204–12.
Krattinger N et al. (2011) Regulation of proliferation and differentiation of human fetal bone cells. Eur Cell Mater 21: 46–58.
Williams CM et al. (2014) PKCα negatively regulates in vitro proplatelet formation and in vivo platelet production in mice. Platelets 25(1): 62–8.

Related Small Molecules

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This product is hazardous. Please refer to the Safety Data Sheet (SDS).

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