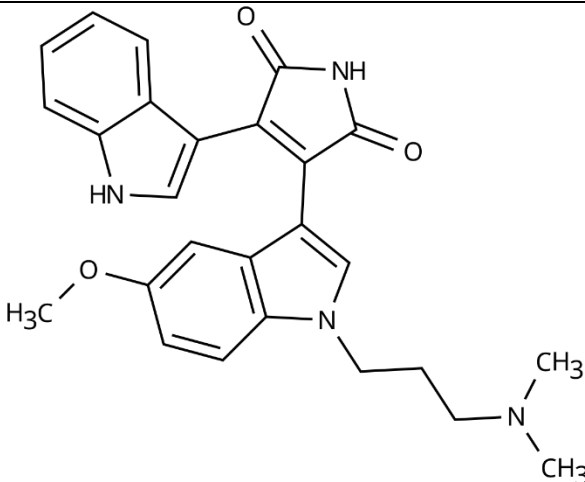


TrailBio® Gö6983 User Instructions

Product Configurations

Catalog Number	Size	Quantity
TB64844	5 mg	1 vial

Product Description

Category	Specification
Product	Gö6983
Synonyms	Go 6983, Goe 6983, Gö 6983
CAS Number	133053-19-7
MDL Number	MFCD04040031
Formula	C ₂₆ H ₂₆ N ₄ O ₃
Molecular Weight	442.51 g/mol
Storage (Solid)	-20 °C for up to 3 years or 4 °C for up to 2 years
Storage (Solution)	-80 °C for up to 6 months or -20 °C for up to 1 month
Shipping	Ambient temperature
Chemical Structure	 The chemical structure of Gö6983 is a complex molecule featuring a central indole ring system. It is substituted with a 3-methoxyphenyl group, a 3-(dimethylamino)propyl group, and a 3-(2-oxo-1H-indol-3-yl) group. The structure is shown in a skeletal format with all atoms and bonds explicitly drawn.

Quality & Analytical Specifications

Test Parameter	Specification
Solid Appearance (Color)	Pink to red
Purity	≥98%

Solubility

Solvent	Solubility	Notes
DMSO	100 mg/ml (225.98 mM)	May require sonication and heating up to 60 °C

Solution Preparation Guide

Amount	1 mM	5 mM	10 mM
1 mg	2.260 ml	0.452 ml	0.226 ml
5 mg	11.299 ml	2.260 ml	1.130 ml
10 mg	22.598 ml	4.520 ml	2.260 ml

Biological Description

Gö6983 is a synthetic, cell-permeable inhibitor of protein kinase C (PKC) that acts on several PKC isoforms, including PKC α , PKC β , PKC γ , PKC δ , and PKC ζ . By competitively blocking ATP binding, it suppresses PKC-mediated phosphorylation and alters downstream signaling involved in cell proliferation, differentiation, and inflammatory responses. Researchers use Gö6983 to investigate PKC-dependent signaling, cellular regulation, and the contributions of individual PKC isoforms to biological processes. It is also an important component of naïve pluripotent media formulations.

Associated Pathways and Applications

Category	Description
Associated Pathways	Protein kinase C (PKC) signaling, PKC-mediated protein phosphorylation, intracellular signal transduction, cellular growth and differentiation signaling
Applications	PKC signaling research, protein phosphorylation studies, inflammatory response studies, PKC isoform activity investigations, cellular reprogramming, naïve pluripotency.

Activity & Targets

Target	IC ₅₀
PKC γ	6 nM
PKC α	7 nM
PKC β	7 nM
PKC δ	10 nM

PKC ζ	60 nM
PKC μ	20000 nM

Notes

- When using DMSO-based stock solutions, maintain a final DMSO concentration of <0.5% in cell culture applications to minimize potential cellular toxicity, unless a higher concentration has been validated for the specific cell type.
- Avoid repeated freeze–thaw cycles. Prepare single-use aliquots when possible.
- The compound may collect on the vial cap or neck during shipping. Before opening the vial, centrifuge it briefly to bring the contents to the bottom.
- A Certificate of Analysis (CoA) is available upon request. Please contact support@trailbio.com.

Also available from Trailhead Biosystems®

Cells

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- TrailBio® Hematopoietic Progenitor Cells (Cat No. ME060001020)
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- TrailBio® LDN-193189 dihydrochloride (Cat No. TB86388)
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