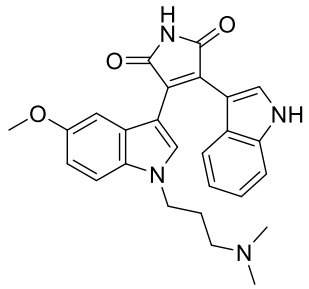
Product data sheet

MedKoo Cat#: 406136 Name: Go6983 CAS: 133053-19-7 Chemical Formula: $C_{26}H_{26}N_4O_3$ Exact Mass: 442.2005 Molecular Weight: 442.5190	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
GO6983 is a potent protein kinase C (PKC) inhibitor. GO6893 displays cardioprotective properties; reduces polymorphonuclear leukocyte adherence and infiltration following myocardial ischemia/reperfusion injury.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	10.0	22.60
DMF:PBS (pH 7) (1:10)	0.1	0.23
DMSO	38.53	87.07

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.26 mL	11.30 mL	22.60 mL
5 mM	0.45 mL	2.26 mL	4.52 mL
10 mM	0.23 mL	1.13 mL	2.26 mL
50 mM	0.05 mL	0.23 mL	0.45 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Gehring MP, Pasquale EB. Protein kinase C phosphorylates the EphA2 receptor on serine 892 in the regulatory linker connecting the kinase and SAM domains. Cell Signal. 2020 Sep;73:109668. doi: 10.1016/j.cellsig.2020.109668. Epub 2020 May 13. PMID: 32413552; PMCID: PMC7668293.
2. Chen X, Lv Q, Ma J, Liu Y. PLCγ2 promotes apoptosis while inhibits proliferation in rat hepatocytes through PKCD/JNK MAPK and PKCD/p38 MAPK signalling. Cell Prolif. 2018 Jun;51(3):e12437. doi: 10.1111/cpr.12437. Epub 2018 Feb 11. PMID: 29430764; PMCID: PMC6528867.

In vivo study

1. Fei YD, Li W, Hou JW, Guo K, Chen XM, Chen YH, Wang Q, Xu XL, Wang YP, Li YG. Oxidative Stress-Induced Afterdepolarizations and Protein Kinase C Signaling. Int J Mol Sci. 2017 Mar 30;18(4):688. doi: 10.3390/ijms18040688. PMID: 28358314; PMCID: PMC5412274.
2. Zhang J, Wang M, Li Z, Bi X, Song J, Weng S, Fu G. NADPH oxidase activation played a critical role in the oxidative stress process in stable coronary artery disease. Am J Transl Res. 2016 Dec 15;8(12):5199-5210. PMID: 28077995; PMCID: PMC5209475.

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7. Bioactivity

Biological target:

Go 6983 is a pan-PKC inhibitor against for PKCα, PKCβ, PKCγ, PKCδ and PKCζ with IC50 of 7 nM, 7 nM, 6 nM, 10 nM and 60 nM, respectively.

In vitro activity

S892 phosphorylation of endogenous EphA2 is inhibited by the broad spectrum PKC inhibitor Go 6983 in most cancer cell lines (Fig. 5A) and some non-transformed cell lines (Fig. 5B). This implies that one or more of the kinases targeted by Go 6983 (including conventional PKCs, PKCδ and PKCζ; Table S1) are responsible for physiological and pathological EphA2 phosphorylation on S892.

Reference: Cell Signal. 2020 Sep;73:109668. https://pubmed.ncbi.nlm.nih.gov/32413552/

In vivo activity

In another series of experiments, after EADs were induced by H2O2 perfusion, rabbit myocytes were perfused with bath solution containing both Gö 6983 and H2O2. Gö 6983 effectively suppressed H2O2-induced EADs, DADs and TAs in five out of five myocytes. Five consecutive APs under control conditions, in the presence of H2O2 and after the addition of Gö 6983, are shown in Figure 3A.

Reference: Int J Mol Sci. 2017 Mar 30;18(4):688. https://pubmed.ncbi.nlm.nih.gov/28358314/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.