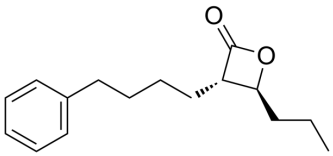
GK563

Cat. No.:	HY-138990
CAS No.:	2351820-19-2
Molecular Formula:	$C_{16}H_{22}O_2$
Molecular Weight:	246.34
Target:	Phospholipase; Apoptosis
Pathway:	Metabolic Enzyme/Protease; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	GK563 is a selective Ca^{2+}-independent phospholipase A_2 (GVIA iPLA$_2$) inhibitor with an IC_{50} value of 1 nM. GK563 is 22000 times more active against GVIA iPLA$_2$ than GIVA cPLA$_2$. GK563 reduces β-cell apoptosis induced by proinflammatory cytokines, raising the possibility that it can be beneficial in countering autoimmune diseases, such as type 1 diabetes[1].
IC_{50} & Target	IC50: 1 nM (GVIA iPLA2), 22 μM (GVIA cPLA2)[1]
In Vitro	GK563 (0.091 M) inhibits the activity of 100% GVIA iPLA$_2$, 88% GVIA cPLA$_2$ and 25% GV sPLA$_2$[1]. GK563 (0-0.1 μM) inhibits GVIA iPLA$_2$ with a X_I(50) value of 0.0000021 and inhibits GVIA cPLA$_2$ with an IC_{50} value of 22 μM[1]. GK563 (0-0.1 μM) shows a better inhibitory effect than fluoroketone FKGK18 to GVIA iPLA$_2$ with an IC_{50} value of 1 nM[1]. GK563 (0-0.1 μM; 16 h) reduces β-cell apoptosis induced by proinflammatory cytokines[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1]

Cell Line:	β-cell line
Concentration:	0.1-10 μM
Incubation Time:	16 h
Result:	Promoted a slight but modest rise in cell death when worked alone, but produced a concentration-dependent inhibition of β-cell apoptosis by the co-treatment of cells with cytokines.

REFERENCES

[1]. Dedaki C, et al. β-Lactones: A Novel Class of Ca2+-Independent Phospholipase A2 (Group VIA iPLA2) Inhibitors with the Ability To Inhibit β-Cell Apoptosis. J Med Chem. 2019 Mar 28;62(6):2916-2927.

Caution: Product has not been fully validated for medical applications. For research use only.

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