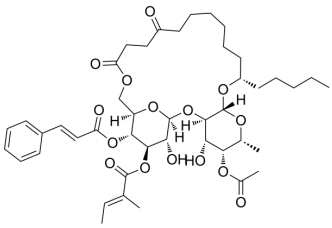
Ipomoeassin F

Cat. No.:	HY-N10661
CAS No.:	915392-44-8
Molecular Formula:	$C_{44}H_{62}O_{15}$
Molecular Weight:	830.95
Target:	SARS-CoV
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Ipomoeassin F is a potent and selective endoplasmic reticulum (ER) protein-translocation inhibitor by targeting the pore-forming subunit of the Sec61 complex (Sec61α) at the ER membrane. Ipomoeassin F selectively inhibits the ER membrane translocation of SARS-CoV-2 proteins. Ipomoeassin F block the ER translocation of secretory proteins and type I transmembrane proteins (TMPs), but not type III TMPs[1][2][3].

In Vitro

Ipomoeassin F (1-500 nM; 24 h) potently inhibits α1AT translocation into the ER[1].

Ipomoeassin F is strongly active in the A2780 (human ovarian cancer cell line) assay with an IC_{50} value of 0.036 μM[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	HepG2 cells
Concentration:	1, 5, 10, 25, 50, 75, 100, 250, 500 nM
Incubation Time:	24 h
Result:	Downregulated cellular ATP levels and inhibited Sec61-mediated protein translocation with comparable potency.

REFERENCES

[1]. Peristera Roboti, et al.Ipomoeassin-F disrupts multiple aspects of secretory protein biogenesis. Sci Rep. 2021 Jun 2;11(1):11562.

[2]. Shugeng Cao, et al. Ipomoeassin F, a new cytotoxic macrocyclic glycoresin from the leaves of Ipomoea squamosa from the Suriname rainforest.Nat Prod Res. 2007 Aug;21(10):872-6.

[3]. Sarah O'Keefe, et al. Ipomoeassin-F inhibits the in vitro biogenesis of the SARS-CoV-2 spike protein and its host cell membrane receptor. J Cell Sci. 2021 Feb 19;134(4):jcs257758.

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

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