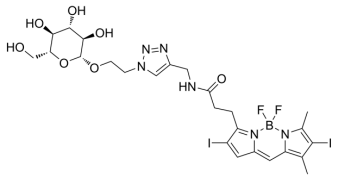
GLUT1-IN-1

Cat. No.:	HY-151486
Molecular Formula:	$C_{25}H_{31}BF_2I_2N_6O_7$
Molecular Weight:	830.17
Target:	GLUT
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	GLUT1-IN-1 is a glucose transporter 1 (GLUT1) inhibitor and has a GLUT1-specific inactivation ability. GLUT1-IN-1 exhibits concentration-dependent cytotoxicity for HeLa, A549 and HepG2 cells with IC_{50} values of 5.49 μM, 11.14 μM, and 8.73 μM, respectively. GLUT1-IN-1 can be used for the research of photodynamic therapy (PDT) and severals cancer[1].
IC_{50} & Target	GLUT1

In Vitro

GLUT1-IN-1(compound 8) (0-100 μM; 1 h) exhibits concentration-dependent cytotoxicity for HeLa, A549 and HepG2 cells with IC_{50} values of 5.49, 11.14, and 8.73 μM, respectively (Under light irradiation) [1].

GLUT1-IN-1 (0-100 μM; 1 h) possesses sufficient photosensitizing ability to exhibit significant cytotoxicity and that the glucose conjugation contributes to the suppression of the cytotoxicity of I_2BODIPY[1].

GLUT1-IN-1 (8 μM, 10 μM; 1 h) selectively interacts with GLUT1 and oxidizes it under light irradiation, resulting in the conversion of GLUT1 into a derivative that is undetectable by immunoblotting analysis[1].

GLUT1-IN-1(1 h) has a GLUT1-specific inactivation ability and causes lightinduced cytotoxicity by modulating the EGFR/MAPK signaling pathway[1].

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

Cell Viability Assay[1]

Cell Line:	HeLa, A549 and HepG2 cells
Concentration:	0-100 μM
Incubation Time:	1 h
Result:	Exhibited a concentration-dependent cytotoxicity against these cancer cell lines under light irradiation.

Western Blot Analysis[1]

Cell Line:	HeLa, A549 and HepG2 cells
Concentration:	10 μM
Incubation Time:	1 h
Result:	Not detected GLUT1in cell lines treated with 10 uM under light irradiation.

	Reduced the levels of epidermal growth factor receptor tyrosine kinase (EGFR), phospho-ERK (Y204), and GLUT1 without affecting ERK, atubulin, and PCNA protein levels.
Immunofluorescence[1]	
Cell Line:	HeLa, A549 and HepG2 cells
Concentration:	8, 10 μM
Incubation Time:	1 h
Result:	Observed a reduction in the intensity of the fluorescent signals due to glucose transporter 1 (GLUT1).

REFERENCES

[1]. Kazuki Miura, et al. Photodynamic Therapy by Glucose Transporter 1-Selective Light Inactivation. ACS Omega Article ASAP.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA