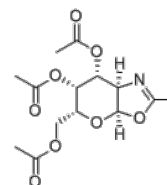


Product Name : FR054
Cat. No. : PC-49557
CAS No. : 10378-06-0
Molecular Formula : C₁₄H₁₉NO₈
Molecular Weight : 329.30
Target : Other Targets
Solubility : 10 mM in DMSO



Biological Activity

FR054 (FR-054) is a specific small molecule inhibitor of hexosamine biosynthetic pathway (HBP) enzyme N-Acetylglucosamine-phosphate Mutase (**PGM3**), shows a remarkable anti-breast cancer effect.

FR054 enhanced the stability of PGM3 protein in a dose-dependent manner and with a more potent binding than the natural substrate GlcNAc-6-P.

FR054 induced an early proliferation arrest followed by a marked cell death increase in breast cancer cells.

FR054 (250 μM, 24 h) treatment efficiently affected both N- and O-glycosylation levels in MDA-MB-231 cells.

FR054 reduced MDA-MB-231 cell adhesion, migration, and integrin β1 membrane localization, induced ER stress and a ROS-dependent apoptotic cell death.

FR054 (1000 mg/kg, 10% DMSO) administered in single dose reduced tumor growth in nude mice xenograft model of TNBC cells MDA-MB-231.

References

Ricciardiello F, et al. *Cell Death Dis.* 2018 Mar 7;9(3):377.

Ricciardiello F, et al. *Oncogene.* 2020 May;39(20):4103-4117.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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