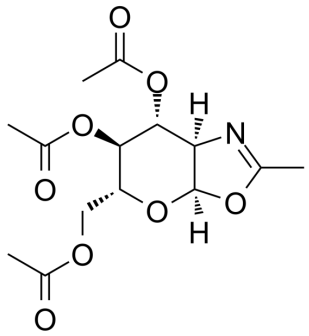
FR054

Cat. No.:	HY-124909A
CAS No.:	35954-65-5
Molecular Formula:	$C_{14}H_{19}NO_8$
Molecular Weight:	329.3
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

FR054 is an inhibitor of the HBP enzyme PGM3, with a remarkable anti-breast cancer effect[1].

In Vitro

FR054 (0.5-1 mM, 24-48 h) induces an early proliferation arrest followed by a marked cell death increase in breast cancer cells and induces apoptosis. The effect of FR054 occurs through PGM3 inhibition instead of other off-target effects[1].
FR054 (250 μM, 24 h) treatment efficiently affects both N- and O-glycosylation levels in MDA-MB-231 cells[1].
FR054 induces endoplasmic reticulum (ER) stress and a ROS-dependent apoptotic cell death[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	MDA-MB-231 cells.
Concentration:	0.5-1 mM.
Incubation Time:	48 h.
Result:	Reduced viability and a significant increase of the apoptosis as compared to the control clone.

In Vivo

FR054 (1000 mg/kg, ip) suppresses cancer growth in MDA-MB-231 xenograft mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice were subcutaneously injected with MDA-MB-231 cells[1].
Dosage:	1000 mg/kg.
Administration:	IP, single or fractionated dose (twice a day 500 mg/kg/dose).
Result:	Appears to have an in vivo antitumor efficacy that is higher when administered twice a day compared to single administration.

REFERENCES

[1]. Francesca Ricciardiello, et al. Inhibition of the Hexosamine Biosynthetic Pathway by targeting PGM3 causes breast cancer growth arrest and apoptosis. Cell Death Dis. 2018 Mar 7;9(3):377.

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