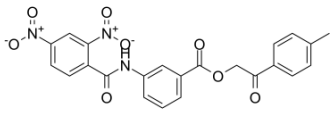
FM19G11

Cat. No.:	HY-15672
CAS No.:	329932-55-0
Molecular Formula:	$C_{23}H_{17}N_3O_8$
Molecular Weight:	463.4
Target:	HIF/HIF Prolyl-Hydroxylase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

FM19G11 is a hypoxia-inducible factor-1-alpha (HIF-1α) inhibitor, and it inhibits hypoxia-induced luciferase activity with an IC_{50} of 80 nM in HeLa cells. FM19G11 modulates other signaling pathways, including mTOR and PI3K/Akt/eNOS, when the HIF-1α pathway is inactivated under normoxic conditions[1][2].

IC_{50} & Target

HIF-1α[1]

In Vitro

FM19G11 (30-300 nM) inhibits HIFα proteins in the HeLa cell lines[1].
FM19G11 (500 nM) promotes oligodendrocyte differentiation under hypoxia[1].
FM19G11 (300 nM; 3 days) suppresses the mRNA levels of O^6-methylguanine DNA-methyltransferase (MGMT) significantly in hypoxic GBM□XD, hypoxic T98G, and normoxic T98G cells[2].
M19G11 (300 nM; 3 days) significantly enhances the pro□apoptotic effect of temozolomide (TMZ), although FM19G11 does not induce apoptosis by itself[2].

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

Cell Viability Assay[2]

Cell Line:	GBM□XD and T98G cells
Concentration:	300 nM
Incubation Time:	3 days
Result:	Had no cytotoxicity by itself. Enhanced the cytotoxicity of TMZ in hypoxic GBM-XD cells, hypoxic T98G cells, and normoxic T98G cells.

Western Blot Analysis[2]

Cell Line:	GBM□XD and T98G cells
Concentration:	300 nM
Incubation Time:	3 days
Result:	Suppressed MGMT expression significantly in both cell lines in hypoxic culture. Downregulated MGMT expression substantially inT98G cells in normoxic culture.

In Vivo	FM19G11 (intramedullary injection; 1-8 weeks) improves locomotion in severe spinal cord injury (SCI)[3]. FM19G11 (intramedullary injection; 8 weeks) induces the expression of GAP43, an axon growth marker, and RIP, a marker for myelinated oligodendrocytes at the injury[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Victoria MM, et, al. FM19G11, a new hypoxia-inducible factor (HIF) modulator, affects stem cell differentiation status. J Biol Chem. 2010 Jan 8; 285(2): 1333-42.

[2]. You CG, et, al. FM19G11 inhibits O 6 -methylguanine DNA-methyltransferase expression under both hypoxic and normoxic conditions. Cancer Med. 2018 May 15; 7(7): 3292-3300.

[3]. Ana AA, et, al. FM19G11 and Ependymal Progenitor/Stem Cell Combinatory Treatment Enhances Neuronal Preservation and Oligodendrogenesis after Severe Spinal Cord Injury. Int J Mol Sci. 2018 Jan 9; 19(1): 200.

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