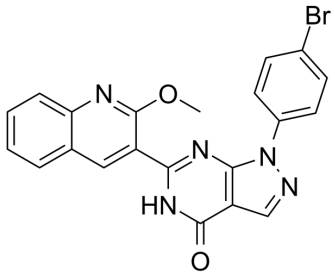
PDE5-IN-3

Cat. No.:	HY-131710
CAS No.:	2538149-57-2
Molecular Formula:	$C_{21}H_{14}BrN_5O_2$
Molecular Weight:	448.27
Target:	Phosphodiesterase (PDE); EGFR; Wnt; Apoptosis
Pathway:	Metabolic Enzyme/Protease; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PDE5-IN-3 (compound 11j) is a potent PDE5 inhibitor with an IC_{50} of 1.57 nM. PDE5-IN-3 shows moderate EGFR inhibition with IC_{50} of 5.827 µM. PDE5-IN-3 significantly inhibits the Wnt/β-catenin pathway (IC_{50}=1286.96 ng/mL). PDE5-IN-3 induces the intrinsic apoptotic mitochondrial pathway in HepG2 cells. PDE5-IN-3 has strong antitumor activity[1].	
IC_{50} & Target	PDE5 1.57 nM (IC_{50})	EGFR 5.827 µM (IC_{50})
In Vitro	PDE5-IN-3 lowers the expression levels of the anti-apoptotic Bcl-2 protein, and causes the high expression of the pro-apoptotic protein Bax, p53, cytochrome c and up-regulates active caspase-9 and caspase-3 levels[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

[1]. Tarek S Ibrahim, et al. Design and synthesis of novel pyrazolo[3,4-d]pyrimidin-4-one bearing quinoline scaffold as potent dual PDE5 inhibitors and apoptotic inducers for cancer therapy. Bioorg Chem. 2020 Dec;105:104352.

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