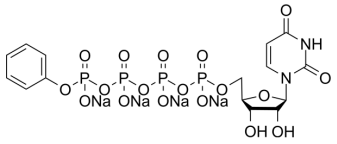
MRS2768 tetrasodium salt

Cat. No.:	HY-108649A
CAS No.:	2567869-47-8
Molecular Formula:	$C_{15}H_{16}N_2Na_4O_{18}P_4$
Molecular Weight:	728.14
Target:	P2Y Receptor
Pathway:	GPCR/G Protein
Storage:	-80°C



BIOLOGICAL ACTIVITY

Description

MRS2768 tetrasodium salt is a moderately potent and selective P2Y2 receptor agonist. MRS2768 tetrasodium salt has a protective effect on cardiomyocytes from ischemic damage in vivo and in vitro[1][2].

IC_{50} & Target

P2Y2 Receptor

In Vitro

MRS2768 (0.01-10000 μM; 24 hours) significantly increases the proliferation of PANC-1 cells[1].

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

Cell Proliferation Assay[1]

Cell Line:	Human pancreatic duct epithelial cells PANC-1
Concentration:	0.01, 0.1, 1, 10, 100, 1000, 10000 μM
Incubation Time:	24 hours
Result:	The effect on proliferation of PANC-1 cells was dependent on concentration (0.1 μM to 1 mM). The concentration that elicited a half-maximal response (EC_{50}) in the stimulation of proliferation was 0.8±1.7 μM. Resulted in a dose- and time-dependent increase of proliferation in PANC-1 cells

In Vivo

MRS2768 (4.44 μg/kg i.v.) pretreatment reduces myocardial damage in mice. MRS2768 has a protective effect on cardiomyocytes from ischemic damage in vivo[2].

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

Animal Model:	Male wild-type mice (C57BL)[2]
Dosage:	4.44 μg/kg
Administration:	Injected i.v.; 1 h before myocardial infarct (MI)
Result:	Pretreatment reduced myocardial damage. The damage was significantly smaller in mice compare to the untreated mice (25.6±4.5% vs. 39.2±6.3%).

REFERENCES

[1]. Ji Hun Choi, et al. Uridine Triphosphate Increases Proliferation of Human Cancerous Pancreatic Duct Epithelial Cells by Activating P2Y2 Receptor. Pancreas. 2013 May;42(4):680-6.

[2]. Edith Hochhauser, et al. P2Y2 Receptor Agonist With Enhanced Stability Protects the Heart From Ischemic Damage in Vitro and in Vivo. Purinergic Signal. 2013 Dec;9(4):633-42.

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