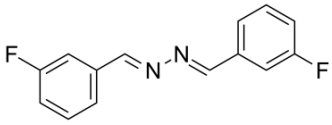
3,3'-Difluorobenzaldazine

Cat. No.:	HY-14611
CAS No.:	15332-10-2
Molecular Formula:	$C_{14}H_{10}F_2N_2$
Molecular Weight:	244.24
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	3,3'-Difluorobenzaldazine (DFB) is a selective positive allosteric modulator of mGluR5. 3,3'-Difluorobenzaldazine potentiates 3- to 6-fold action for mGlu5 agonists (Glutamate, Quisqualate, and 3,5-Dihydroxyphenylglycine), with EC_{50}s in the 2 to 5 μM range[1].
In Vitro	3,3'-Difluorobenzaldazine (DFB) causes a concentration-dependent potentiation of the response of human mGluR5 CHO cells to 300 nM glutamate in this assay. The maximal potentiation at this concentration of glutamate is approximately 3.1-fold, with an EC_{50} for potentiation of 2.6 μM. 3,3'-Difluorobenzaldazine causes similar potentiation of the responses of both human mGluR5 and rat mGluR5 CHO cells to glutamate, quisqualate, and DHPG with comparable potencies[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	3,3'-Difluorobenzaldazine (40-100 nmol; icv) attenuates the locomotor hyperactivity, motor incoordination, and cognitive impairment induced by Ketamine[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male NMRI and ICR mice (8-9 weeks, 33-40 g)[2]
Dosage:	40-100 nmol (~9.7-24.4 μg)
Administration:	ICV
Result:	Attenuated the locomotor hyperactivity, motor incoordination, and cognitive impairment induced by Ketamine.

REFERENCES

[1]. O'Brien JA, et al, Chen TB, et al. A family of highly selective allosteric modulators of the metabotropic glutamate receptor subtype 5. Mol Pharmacol. 2003;64(3):731-740.

[2]. O'Brien JA, et al. A family of highly selective allosteric modulators of the metabotropic glutamate receptor subtype 5. Mol Pharmacol. 2003;64(3):731-740.

Caution: Product has not been fully validated for medical applications. For research use only.

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