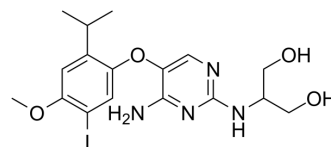


Ro-51

Cat. No.:	HY-14485
CAS No.:	1050670-85-3
Molecular Formula:	C ₁₇ H ₂₃ N ₄ O ₄
Molecular Weight:	474.29
Target:	P2X Receptor
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ro-51 is a potent and selective dual P2X ₃ /P2X _{2/3} antagonist, with IC ₅₀ of 2 nM and 5 nM for P2X ₃ and P2X _{2/3} , respectively. Ro-51 can be used for the research for pain ^{[1][2]} .
IC₅₀ & Target	IC ₅₀ : 2 nM (P2X ₃), 5 nM (P2X _{2/3}) ^[1]
In Vitro	Ro-51 has highly selective for P2X ₃ and P2X _{2/3} exhibiting no antagonistic activity at other P2X receptor family members tested (P2X ₁ , P2X ₂ , P2X ₄ , P2X ₅ , and P2X ₇) at concentrations up to 10 μM ^[1] . RO51 also shows a significant drop in potency on human P2X ₃ receptors (IC ₅₀ = 110.5 and 0.04 nM, respectively for human and rat P2X ₃) ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Ro-51 suffers rapid clearance, short half-lives, and high protein binding in rat ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	Rat ^[1]
Dosage:	2 mg/kg (Pharmacokinetic Analysis)
Administration:	Oral administration
Result:	AUC= 237 ng/h/mL, T _{1/2} =1.52 h

REFERENCES

[1]. Alam Jahangir, et al. Identification and SAR of novel diaminopyrimidines. Part 2: The discovery of RO-51, a potent and selective, dual P2X₃/P2X_{2/3} antagonist for the treatment of pain. *Bioorg Med Chem Lett*. 2009 Mar 15;19(6):1632-5.

[2]. Alexandre Serrano, et al. Differential Expression and Pharmacology of Native P2X Receptors in Rat and Primate Sensory Neurons. *J Neurosci*. 2012 Aug 22; 32(34): 11890–11896.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA