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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
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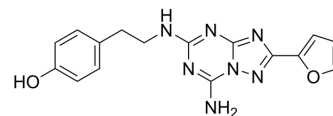
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ZM241385

Cat. No.:	HY-19532
CAS No.:	139180-30-6
Molecular Formula:	C ₁₆ H ₁₅ N ₇ O ₂
Molecular Weight:	337.34
Target:	Adenosine Receptor
Pathway:	GPCR/G Protein
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 30 mg/mL (88.93 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.9644 mL	14.8218 mL	29.6437 mL
	5 mM		0.5929 mL	2.9644 mL	5.9287 mL
	10 mM		0.2964 mL	1.4822 mL	2.9644 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 2.08 mg/mL (6.17 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	ZM241385 is a potent, high affinity and selective adenosine A _{2a} receptor (A _{2A} R) antagonist with a K _i value of 1.4 nM ^{[1][2][3]} .
IC ₅₀ & Target	A2AR 1.4 nM (K _i)
In Vitro	ZM241385 (1 μM; 24-48 hours; PC12 cells) treatment reverses the phenomenon that A _{2A} R agonist CGS21680 significantly

upregulates A_{2A}R mRNA and protein levels^[1].

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

RT-PCR^[1]

Cell Line:	PC12 cells
Concentration:	1 μ M
Incubation Time:	24 hours
Result:	Suppressed the increased A _{2A} R mRNA levels engendered by CGS21680.

Western Blot Analysis^[1]

Cell Line:	PC12 cells
Concentration:	1 μ M
Incubation Time:	48 hours
Result:	Decreased A _{2A} R protein levels

In Vivo

ZM241385 (0.2 μ g/mouse, 0.4 μ g/mouse; intraperitoneal injection; every day; for 11 weeks; female C57BL/6 WT mice) treatment decreases tumor volume, activates CD8⁺ T cells and reduces the frequency of splenic MDSC^[4].

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

Animal Model:	Female C57BL/6 WT mice received 4-nitroquinoline-N-oxide ^[4]
Dosage:	0.2 μ g/mouse, 0.4 μ g/mouse
Administration:	Intraperitoneal injection; every day; for 11 weeks
Result:	Decreased tumor volume, activates CD8 ⁺ T cells and reduces the frequency of splenic MDSC.

CUSTOMER VALIDATION

- Nat Neurosci. 2023 Apr;26(4):542-554.
- Ecotoxicol Environ Saf. 2022 Dec 12;249:114410.
- J Mol Cell Cardiol. 2022 Dec 3;174:88-100.
- Purinergic Signal. 2022 Jul 2.
- SSRN. 2022.

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REFERENCES

[1]. Wang Z, et al. Static magnetic field exposure reproduces cellular effects of the Parkinson's disease drug candidate ZM241385. PLoS One. 2010 Nov 8;5(11):e13883. doi: 10.1371/journal.pone.0013883.

[2]. Linden J, et al. Characterization of human A_{2B} adenosine receptors: radioligand binding, western blotting, and coupling to G(q) in human embryonic kidney 293 cells and HMC-1 mast cells. Mol Pharmacol. 1999 Oct;56(4):705-13.

[3]. Poucher SM, et al. The in vitro pharmacology of ZM 241385, a potent, non-xanthine A2a selective adenosinereceptor antagonist. Br J Pharmacol. 1995 Jul;115(6):1096-102.

[4]. Ludwig S, et al. Impact of combination immunochemotherapies on progression of 4NQO-induced murine oral squamous cell carcinoma. Cancer Immunol Immunother. 2019 Jul;68(7):1133-1141.

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

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