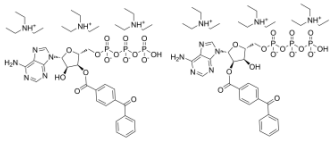
BzATP triethylammonium salt

Cat. No.:	HY-136254
Molecular Formula:	$C_{24}H_{24}N_5O_{15}P_3.C_{18}H_{45}N_3$
Molecular Weight:	1018.97
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	BzATP triethylammonium salt acts as a P2X receptor agonist with pEC_{50}s of 8.74, 5.26, 7.10, 7.50, 6.19, 6.31, 5.33 for P2X1, P2X2, P2X3, P2X2/3, P2X4 and P2X7, respectively[1]. BzATP triethylammonium salt is potent at P2X7 receptors with EC_{50}s of 3.6 μM and 285 μM for rat P2X7 and mouse P2X7, respectively[2].
IC_{50} & Target	pEC50: 8.74 (P2X1), 5.26 (P2X2), 7.10 (P2X3), 6.19 (P2X2/3), 6.31 (P2X4), 5.33 (P2X7)[1] EC50 3.6 μM (rat P2X7); 285 μM (mouse P2X7)[2]

In Vitro

BzATP (10-1000 μM; 24 h) promotes the proliferation and migration of U87 and U251 glioma cells[3].
P2X7R protein expression is induced by BzATP (100 μM; 6-48 h) in human glioma cells[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[3]

Cell Line:	U87 and U251 glioma cells
Concentration:	5, 10, 50, 100, 500 and 1000 μM
Incubation Time:	2, 6, 12, 24, 48 and 72 hours
Result:	The proliferation of U87 and U251 glioma cell lines was significantly increased in the presence of 10-1000 uM and 100-1000 μM, respectively. The peak of cell proliferation of both U87 and U251 cell lines was at 100 μM. The optimal incubation time is 24 hours in both U87 and U251 cells lines.

Western Blot Analysis[3]

Cell Line:	U87 and U251 glioma cells
Concentration:	100 μM
Incubation Time:	6-48 hours
Result:	Induced the upregulation of P2X7R.

In Vivo

BzATP (5 mg/kg) significantly promotes P2X7R expression in the intestines compared with intestines in the sham group and the control group after cecal ligation and puncture (CLP) induction[4].

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

Animal Model:	Male 2-month-old C57BL/6 mice (each weighing between 20 and 25 g)[4]
Dosage:	5 mg/kg
Administration:	Injected through the intraperitoneal route
Result:	At 48 hours, mice in the treated group and control group exhibited mortalities of 91% and 86%, respectively.

REFERENCES

[1]. B R Bianchi, et al. Pharmacological characterization of recombinant human and rat P2X receptor subtypes. Eur J Pharmacol. 1999 Jul 2;376(1-2):127-38.

[2]. Mark T Young, et al. Amino acid residues in the P2X7 receptor that mediate differential sensitivity to ATP and BzATP. Mol Pharmacol. 2007 Jan;71(1):92-100.

[3]. Zhenhua Ji, et al. Involvement of P2X 7 Receptor in Proliferation and Migration of Human Glioma Cells. Biomed Res Int. 2018 Jan 9;2018:8591397.

[4]. Xiuwen Wu, et al. Systemic blockade of P2X7 receptor protects against sepsis-induced intestinal barrier disruption. Sci Rep. 2017 Jun 29;7(1):4364.

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