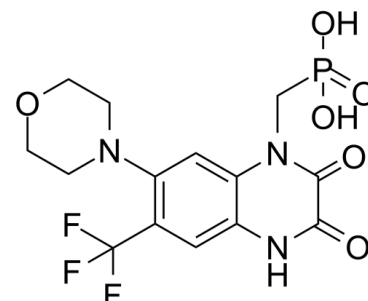


Data Sheet

Product Name:	Fanapanel
Cat. No.:	CS-3611
CAS No.:	161605-73-8
Molecular Formula:	C ₁₄ H ₁₅ F ₃ N ₃ O ₆ P
Molecular Weight:	409.25
Target:	iGluR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Solubility:	DMSO : 1.25 mg/mL (3.05 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Fanapanel (ZK200775) is a highly selective AMPA/kainate antagonist with little activity against NMDA; have K_i values of 3.2 nM, 100 nM, and 8.5 μ M against quisqualate, kainate, and NMDA, respectively. **IC₅₀ & Target: AMPAR In Vitro:** In the cortical slice preparation assay, ZK200775 gave K_i values of 3.2 nM, 100 nM, and 8.5 μ M against quisqualate, kainate, and NMDA, respectively. In the spreading depression assay, it gave IC₅₀ values of 200 nM, 76 nM, 13 μ M, and 18 μ M against quisqualate, kainate, NMDA, and glycine [1]. **In Vivo:** ZK200775 elevated the threshold for AMPA- and kainate-induced clonic seizures in mice with a THRD50 (threshold dose) of 2.9 (1.7–4.6) and 1.6 (1.3–2.0) mg/kg i.v., whereas the threshold for NMDA-induced seizures was elevated only in doses, THRD50 of 24.1 (21.9–26.5) mg/kg i.v., which affected motor coordination in the rotating rod, ED50 14.6 (12.1–17.6) mg/kg. ZK200775 in doses of 10 and 30 mg/kg i.v. reduced muscle tone in genetically spastic rats [1]. ZK200775 (3.0 but not 1.5 or 6.0 mg/kg) significantly decreased the nicotine-induced (0.6 mg/kg) DA release in the NAcc and nicotine-stimulated LMA. ZK200775 (1.5, 3.0, 6.0 mg/kg) alone influenced neither DA release nor LMA. ZK200775 showed 34-fold selectivity for AMPA receptors compared to NMDA receptors and no affinity to nicotine receptors

References:

- [1]. Turski L, et al. ZK200775: a phosphonate quinoxalinedione AMPA antagonist for neuroprotection in stroke and trauma. *Proc Natl Acad Sci U S A*. 1998 Sep 1;95(18):10960-5.
- [2]. Kosowski AR, et al. Nicotine-induced dopamine release in the nucleus accumbens is inhibited by the novel AMPA antagonist ZK200775 and the NMDA antagonist CGP39551. *Psychopharmacology (Berl)*. 2004 Aug;175(1):114-23.

CAIndexNames:

Phosphonic acid, P-[[[3,4-dihydro-7-(4-morpholinyl)-2,3-dioxo-6-(trifluoromethyl)-1(2H)-quinoxaliny]]methyl]-

SMILES:

O=C(N1CP(O)(O)=O)C(NC(C1=C2)=CC(C(F)(F)F)=C2N3CCOCC3)=O

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

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