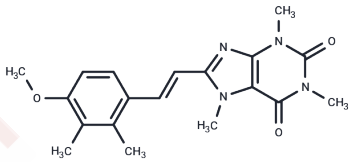
Data Sheet (Cat.No.T13745)

TargetMol

KF21213

Chemical Properties



CAS No. :	155271-17-3
Formula:	C19H22N4O3
Molecular Weight:	354.4
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	KF21213 shows a high affinity for the adenosine A2A receptors (Ki=3.0 nM). KF21213 is a highly selective ligand for mapping CNS adenosine A2A receptors.
Targets(IC50)	Histone Demethylase,Adenosine Receptor
In vitro	KF21213 shows a high affinity for the adenosine A2A receptors in vitro (Ki=3.0 nM) and a very low affinity for the A1 receptors (Ki>10,000 nM).KF21213 as a PET ligand for mapping adenosine A2A receptors in the central nervous system (CNS).
In vivo	Striatal uptake of [11C]KF21213 shows a gradual increase for the initial 15 minutes before declining, while its absorption by the cortex and cerebellum decreases swiftly post-injection, aligning with blood levels. As a result, the striatum to cortex and striatum to cerebellum uptake ratios escalate to 8.6±1.6 and 10.5±2.1 (N=4), respectively, within 60 minutes. Initially retained for 5 minutes, [11C]KF21213's striatal activity then diminishes over time, unlike [11C]KF18446, which drops quickly. Similarly, cerebellar activity for both ligands decreases rapidly. The striatum-to-cerebellum uptake ratio for [11C]KF21213 progressively increases to 2.4±0.5 (N=3) over 50-60 minutes, while for [11C]KF18446, it peaks within the first 10 minutes before stabilizing at 1.4±0.3 (N=3) between 25-35 minutes.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8217 mL	14.1084 mL	28.2167 mL
5 mM	0.5643 mL	2.8217 mL	5.6433 mL
10 mM	0.2822 mL	1.4108 mL	2.8217 mL
50 mM	0.0564 mL	0.2822 mL	0.5643 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Wang WF, et al. Carbon-11-labeled KF21213: a highly selective ligand for mapping CNS adenosine A(2A) receptors with positron emission tomography. Nucl Med Biol. 2000 Aug;27(6):541-6.