

PDE9 Inhibitor, PF-04447943 - CAS 1082744-20-4 - Calbiochem

Art. ID SAF-5383370001

Unit EA

Description

A cell-permeable, blood-brain barrier permeant, pyrazolo[3,4 d]pyrimidinone compound that acts as a highly potent, selective, and active site-targeting inhibitor of phosphodiesterase 9A (PDE9A, $K_i = 2.8$ nM, 4.5 nM, and 18 nM for human, rhesus monkey, and rat recombinant PDE9A, respectively). Exhibits high selectivity over other phosphodiesterases ($K_i = 8.6, 99, 50, 29, 14.9, 5.3, 75, 50, 51.2,$ and 80×10^6 M for PDE1, PDE2A3, PDE3A, PDE4A, PDE5A, PDE6C, PDE7A2, PDE8A, PDE10, PDE11, respectively). Does not affect the activity of 60 other enzymes and receptors. Shown to diminish ANP-stimulated cGMP levels in human embryonic kidney cells expressing rhesus PDE9A2 ($IC_{50} = 375$ nM). Shown to improve performance in novel object recognition in rats (~ 3 mg/kg, p.o.). Exhibits desirable pharmacokinetic properties with $t_{1/2} = 4.9$ h, $T_{max} = 0.3$ h in rat. A cell-permeable, blood-brain barrier permeant, pyrazolo[3,4 d]pyrimidinone compound that acts as a highly potent, selective, and active site-targeting inhibitor of phosphodiesterase 9A (PDE9A, $K_i = 2.8$ nM, 4.5 nM, and 18 nM for human, rhesus monkey, and rat recombinant PDE9A, respectively). Exhibits high selectivity over other phosphodiesterases ($K_i = 8.6, 99, 50, 29, 14.9, 5.3, 75, 50, 51.2,$ and 80×10^6 M for PDE1, PDE2A3, PDE3A, PDE4A, PDE5A, PDE6C, PDE7A2, PDE8A, PDE10, PDE11, respectively). Does not affect the activity of 60 other enzymes and receptors. Shown to diminish ANP-stimulated cGMP levels in human embryonic kidney cells expressing rhesus PDE9A2 ($IC_{50} = 375$ nM). Shown to improve performance in novel object recognition in rats (~ 3 mg/kg, p.o.). Exhibits desirable pharmacokinetic properties with $t_{1/2} = 4.9$ h, $T_{max} = 0.3$ h in rat. Please note that the molecular weight for this compound is batch-specific due to variable water content. Please refer to the vial label or the certificate of analysis for the batch-specific molecular weight. The molecular weight provided represents the baseline molecular weight without water.

Text/Information	Analyte/Parameter	CAS number	Concentration/Value	Unit	Method	Source
	PDE9 Inhibitor, PF-0444	[1082744-20-4]				
	7943					