Product Data Sheet

Product Name: PF-622
Cat. No.: GC15210

Chemical Properties

Cas. No.	898235-65-9		
Chemical Name	N-phenyl-4-(2-quinolinylmethyl)-1-piperazinecarboxamide		
SMILES	O=C(Nc1ccccc1)N1CCN(CC1)Cc1ccc2ccccc2n1		
Formula	$C_{21}H_{22}N_4O$	M.Wt	346.4
Solubility	≤0.3mg/ml in ethanol;2mg/ml in DMSO;3mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	PF-622		

Background

PF-622 is a potent, time-dependent, irreversible FAAH inhibitor [1].

Fatty acid amide hydrolase (FAAH), belongs to a member of an unusual class of serine hydrolases, is an integral membrane enzyme involved in regulating the fatty acid amide family of lipid transmitters. Genetic or pharmacological inactivation of FAAH leads to elevated endogenous levels of fatty acid amides with analgesic, anti-inflammatory, anxiolytic, and antidepressant phenotypes. The FAAH is an attractive drug target for the treatment of pain [1].

In vitro: PF-622 inhibited the activity of FAAH in a time-dependent manner with the IC50 values of 0.99 and 0.033 μM in human recombinant FAAH for 5 and 60 minutes, respectively [1]. In various human and murine tissue proteome samples, PF-622 showed highly selectivity for FAAH in relative to other serine hydrolases, showing no discernable off-site activity up to 500 μM [1]. PF-622 at 1 μM decreased IL-2 production in both

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healthy subjects and in HCV patients [2].

References:

[1] Ahn K, Johnson D S, Fitzgerald L R, et al. Novel mechanistic class of fatty acid amide hydrolase inhibitors with remarkable selectivity[J]. Biochemistry, 2007, 46(45): 13019-13030.

[2] Patsenker E, Sachse P, Chicca A, et al. Elevated levels of endocannabinoids in chronic hepatitis C may modulate cellular immune response and hepatic stellate cell activation[J]. International journal of molecular sciences, 2015, 16(4): 7057-7076.

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