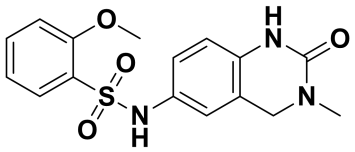
Xcess Biosciences Inc.
7144 N Harlem Ave #169
Chicago, IL 60631 USA

http://www.xcessbio.com
Toll free: 1-866-706-2330
Fax: 1-619- 810-0718
Email: info@xcessbio.com

BET Inhibitor PFI-1

Chemical Name: 2-methoxy-N-(3-methyl-2-oxo-1,2,3,4-tetrahydroquinazolin-6-yl)benzenesulfonamide



Molecular Weight:	347.39
Formula:	$C_{16}H_{17}N_3O_4S$
Purity:	≥98%
CAS#:	1403764-72-6
Solubility:	DMSO up to 50 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

PFI-1 is a novel potent, selective and cell permeable inhibitor of the bromodomain and extra terminal (BET) family proteins BRD2 and BRD4 with IC50 of ~98 nM and 220 nM respectively. Co-crystal structures showed that PFI-1 acts as an acetyl-lysine (Kac) mimetic inhibitor efficiently occupying the Kac binding site in BRD2 and BRD4. It has an EC_{50} of 1.89 μM for the inhibition of IL6 production from human blood mononuclear cells stimulated by LPS. PFI-1 induces dose-dependent reduction of cell viability in T4302 CD133+ cells, inhibits the proliferation of three NET cell lines (Bon-1 derived from a pancreatic NET, and H727 and H720 derived from lung NETs). It was also shown that PFI-1 could significantly down-regulate Aurora B kinase, thus attenuating phosphorylation of the Aurora substrate H3S10.

How to Use:

In vitro: PFI-1 was used at 10 μM final concentration in various in vitro assays.

In vivo: PFI-1 could be dosed to rats by IV administration at 1 mg/kg once per day, or oral administration at 2 mg/kg once per day.

Reference:

1. Fish PV, et al. Identification of a chemical probe for bromo and extra C-terminal bromodomain inhibition through optimization of a fragment-derived hit. (2012) J Med Chem. 55(22):9831-7.
2. Picaud S, et al. PFI-1, a Highly Selective Protein Interaction Inhibitor, Targeting BET Bromodomains. (2013) Cancer Res. 73(11):3336-3346.