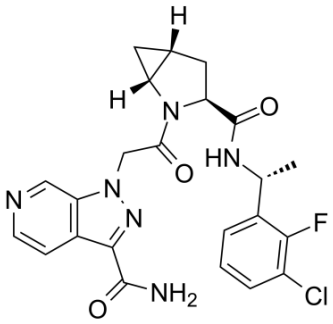
Factor D inhibitor 6

Cat. No.:	HY-122700
CAS No.:	1386455-51-1
Molecular Formula:	$C_{23}H_{22}ClFN_6O_3$
Molecular Weight:	484.91
Target:	Complement System
Pathway:	Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Factor D inhibitor 6 is a potent, highly selective and orally active factor D (FD) inhibitor with an IC_{50} of 30 nM and a K_d of 6 nM. Factor D inhibitor 6 is inactive against factor B, lassical and lectin complement-pathway activation, and a broad assay panel of receptors, ion channels, kinases and proteases[1].
IC_{50} & Target	IC50: 30 nM (Factor D)[1] Kd: 6 nM (Factor D)[1]
In Vitro	Factor D inhibitor 6 (compound 6) effectively blocks both alternative pathway (AP)-mediated hemolysis in 10% human serum (IC_{50} = 6 nM) and AP-induced membrane-attack complex (MAC) formation in lepirudinanticoagulated 50% human whole blood (IC_{50} = 0.14 μM)[1]. Factor D inhibitor 6 (compound 6) shows modest inhibition of murine FD (IC_{50} = 0.86 μM)[1]. Factor D inhibitor 6 (compound 6) inhibits both hemolysis and component 3 (C3) deposition on the surface of red blood cells (RBCs) with an IC_{50} value of 70 nM, consistent with inhibition of the AP amplification loop[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Factor D inhibitor 6 (Compound 6; 1-10 mg/kg; Oral gavage; once; C57Bl/6 mice) treatment dosed-ependently inhibits complement activation, with full inhibition at 10 mg/kg. Factor D inhibitor 6 shows sustained inhibition of LPS-induced AP activation for at least 8 h post-dose with an EC_{50} of 0.034 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57Bl/6 mice induced by lipopolysaccharide (LPS)[1]
Dosage:	1 mg/kg, 3 mg/kg, 10 mg/kg
Administration:	Oral gavage; once
Result:	Dosed-ependently inhibited complement activation, with full inhibition at 10 mg/kg.

REFERENCES

[1]. Jürgen Maibaum, et al. Small-molecule Factor D Inhibitors Targeting the Alternative Complement Pathway. Nat Chem Biol. 2016 Dec;12(12):1105-1110.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA