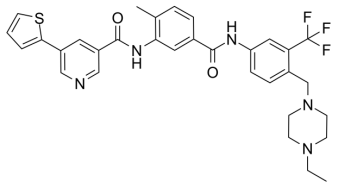
ALW-II-41-27

Cat. No.:	HY-18007
CAS No.:	1186206-79-0
Molecular Formula:	$C_{32}H_{32}F_3N_5O_2S$
Molecular Weight:	607.69
Target:	Ephrin Receptor
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 47 mg/mL (77.34 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6456 mL	8.2279 mL	16.4558 mL
	5 mM	0.3291 mL	1.6456 mL	3.2912 mL
	10 mM	0.1646 mL	0.8228 mL	1.6456 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (4.11 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (4.11 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	ALW-II-41-27 is a Eph family tyrosine kinase inhibitor with an IC_{50} of 11 nM for Eph2.
IC_{50} & Target	IC50: 11 nM (Eph2)[1]
In Vitro	ALW-II-41-27 inhibits Ba/F3 cells transformed with Tel fusions of EphA3, Kit, Fms, KDR, FLT1, FGR, Src, Lyn, Bmx, and Bcr-Abl with an EC_{50} below 500 nM. ALW-II-41-27 exhibits cross reactivity with Bcr-Abl. ALW-II-41-27 inhibits b-raf, CSF1R, DDR1,

DDR2, EphA2, EphA5, EphA8, EphB1, EphB2, EphB3, Frk, Kit, Lck, p38α, p38β, PDGFRα, PDGFRβ, and Raf1 and many more demonstrating how introduction of the thiophene group can have a tremendous impact on kinase selectivity[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Signal Transduct Target Ther. 2022 Feb 2;7(1):33.
- Nat Commun. 2023 May 13;14(1):2756.
- Nat Commun. 2017 Jun 6;8:15729.
- Cell Death Dis. 2020 Aug 27;11(8):709.
- Cell Death Dis. 2018 Nov 19;9(12):1146.

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REFERENCES

[1]. Choi, et al. Discovery and structural analysis of Eph receptor tyrosine kinase inhibitors. Bioorganic & Medicinal Chemistry Letters (2009), 19(15), 4467-4470.

[2]. Song W, et al. Targeting EphA2 impairs cell cycle progression and growth of basal-like/triple-negative breast cancers. Oncogene. 2017 Jun 5.

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