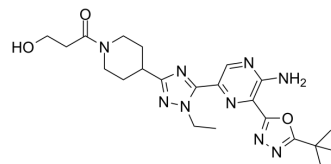


AZD-8835

Cat. No.:	HY-12869		
CAS No.:	1620576-64-8		
Molecular Formula:	C ₂₂ H ₃₁ N ₉ O ₃		
Molecular Weight:	469.54		
Target:	PI3K		
Pathway:	PI3K/Akt/mTOR		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 12.5 mg/mL (26.62 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
	Preparing Stock Solutions	1 mM	2.1297 mL	10.6487 mL
		5 mM	0.4259 mL	2.1297 mL
		10 mM	0.2130 mL	1.0649 mL
	Please refer to the solubility information to select the appropriate solvent.			
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 0.83 mg/mL (1.77 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 0.83 mg/mL (1.77 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 0.83 mg/mL (1.77 mM); Clear solution 			

BIOLOGICAL ACTIVITY

Description	AZD8835 is a potent and selective inhibitor of PI3Kα and PI3Kδ with IC ₅₀ s of 6.2 and 5.7 nM, respectively.			
IC₅₀ & Target	PI3Kδ 5.7 nM (IC ₅₀)	PI3Kα 6.2 nM (IC ₅₀)	PI3Kα-H1047R 5.8 nM (IC ₅₀)	PI3Kα-E545K 6 nM (IC ₅₀)
	PI3Kγ 90 nM (IC ₅₀)	PI3Kβ 431 nM (IC ₅₀)		

In Vitro

The selectivity profile of AZD8835 (Compound 25) among the class I PI3K isoforms is tested in enzyme and cell based assays. At the enzyme level, AZD8835 is a potent mixed inhibitor of PI3K α (IC₅₀ 6.2 nM) and PI3K δ (IC₅₀ 5.7 nM), with selectivity against PI3K β (IC₅₀ 431 nM) and PI3K γ (IC₅₀ 90 nM). AZD8835 is also a potent inhibitor of the commonly occurring PI3K α mutants, PI3K α -E545K (IC₅₀ 6 nM) and PI3K α -H1047R (IC₅₀ 5.8 nM). In cell-based assays assessing the ability to inhibit Akt phosphorylation, AZD8835 is a potent inhibitor in cells sensitive to PI3K α inhibition (IC₅₀ 57 nM in PIK3CA mutant human breast ductal carcinoma BT474 cell line) and in cells sensitive to PI3K δ inhibition (IC₅₀ 49 nM in Jeko-1 B cell line, but not to cells sensitive to PI3K β inhibition (IC₅₀ 3.5 μ M in PTEN null breast adenocarcinoma MDA-MB-468 cells) or to PI3K γ inhibition (IC₅₀ 530 nM in monocytic RAW264 cell line)^[1].

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

In Vivo

AZD8835 (Compound 25) displays good solubility, good permeability and low turnover in hepatocytes from various species. As expected from the in vitro data, low in vivo clearance associated with high bioavailability is seen in both rat and dog.

AZD8835 shows high exposure following oral administration to SCID mice (AUC: 137 μ M.h and C_{max} 34 μ M at 50 mg/kg p.o.) and is selected for further in vivo evaluation. In a pharmacodynamic experiment following chronic oral dosing (25 mg/kg b.i.d. or 6 mg/kg b.i.d. of AZD8835) in nude mice bearing mutant H1047R PI3K α SKOV-3 tumour xenografts, target modulation is assessed by measuring Akt phosphorylation levels at Ser473 at 30 minutes and 8 hours. At both doses, strong inhibition of Akt phosphorylation is observed at the 30 minute timepoint. At 8 hours, significant inhibition is still seen at the 25 mg/kg dose, whereas no inhibition is seen at the lower dose of 6 mg/kg, consistent with the lower plasma concentrations observed^[1].

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

CUSTOMER VALIDATION

- Mol Cancer. 2023 Mar 30;22(1):64.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Barlaam B, Discovery of 1-(4-(5-(5-amino-6-(5-tert-butyl-1,3,4-oxadiazol-2-yl)pyrazin-2-yl)-1-ethyl-1,2,4-triazol-3-yl)piperidin-1-yl)-3-hydroxypropan-1-one (AZD8835): A potent and selective inhibitor of PI3K α and PI3K δ for the treatment of cancers. Bio

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