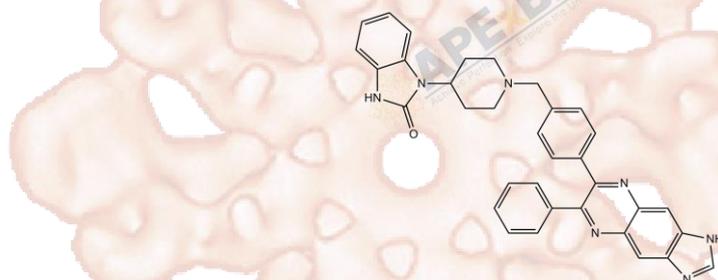


# Product Data Sheet

## AKT inhibitor VIII

<b>Cat. No.:</b>	A3149
<b>CAS No.:</b>	612847-09-3
<b>Formula:</b>	C34H29N7O
<b>M.Wt:</b>	551.64
<b>Synonyms:</b>	
<b>Target:</b>	PI3K/Akt/mTOR Signaling
<b>Pathway:</b>	Akt
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

insoluble in H<sub>2</sub>O; insoluble in EtOH; ≥9.2 mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	<b>Concentration</b>			
	<b>1 mM</b>	1.8128 mL	9.0639 mL	18.1278 mL
	<b>5 mM</b>	0.3626 mL	1.8128 mL	3.6256 mL
	<b>10 mM</b>	0.1813 mL	0.9064 mL	1.8128 mL

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

### Biological Activity

Shortsummary

Allosteric Akt kinase inhibitor

IC<sub>50</sub> & Target

58 nM (Akt1), 210 nM (Akt2), 2119 nM (Akt3)

In Vitro

#### Cell Viability Assay

Cell Line:	MCF-7 cell lines
Preparation method:	The solubility of this compound in DMSO is >9.2 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	10-100 μM for 24, 48, and 72 h

	Applications:	AKT inhibitor VIII significantly inhibited the proliferation and increased the LDH release in both cell lines in a dose-dependent manner. AKT inhibitor VIII dose-dependently induced cell cycle arrest at the G0/G1 phase. The protein expressions of p-cyclin D1, total cyclin D1, p-CDK2, total CDK2, pRb, total Rb, Bcl-xL, and Akt were significantly inhibited by AKT inhibitor VIII, whereas the protein expressions of Bad and Bax, and the proteolytic cleavage of caspase-9, caspase-7, and polyADP-ribose polymerase (PARP) were dramatically increased.
In Vivo	<b>Animal experiment</b>	
	Animal models:	BALB/c nude mice
	Dosage form:	15 mg/kg and 30 mg/kg by intraperitoneal administration once daily for 8 days
	Applications:	AKT inhibitor VIII dose-dependently suppressed the tumor growth in vivo, achieving 32% and 54% inhibition rates after intraperitoneal injection of 15 mg/kg and 30 mg/kg, respectively.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

## Product Citations

1.Eldad TZAHOR,Gabriele Matteo D'UVA,et al. "Methods, kits and devices for promoting cardiac regeneration." US Patent App. 15 ,2016.

2.D'Uva, Gabriele, et al. "ERBB2 triggers mammalian heart regeneration by promoting cardiomyocyte dedifferentiation and proliferation." Nature Cell Biology (2015).PMID:25848746

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## References

[1] Zhong Z, Dang Y, Yuan X, Guo W, Li Y, Tan W, Cui J, Lu J, Zhang Q, Chen X, Wang Y. Furanodiene, a natural product, inhibits breast cancer growth both in vitro and in vivo. Cell Physiol Biochem. 2012;30(3):778-90.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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