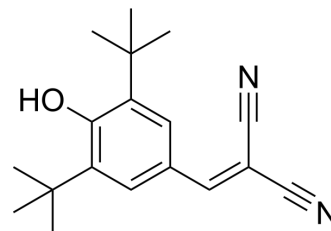


## Tyrphostin A9

<b>Cat. No.:</b>	HY-15511		
<b>CAS No.:</b>	10537-47-0		
<b>Molecular Formula:</b>	C <sub>18</sub> H <sub>22</sub> N <sub>2</sub> O		
<b>Molecular Weight:</b>	282.38		
<b>Target:</b>	VEGFR; Influenza Virus; PDGFR		
<b>Pathway:</b>	Protein Tyrosine Kinase/RTK; Anti-infection		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 50 mg/mL (177.07 mM; Need ultrasonic)  
 H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.5413 mL	17.7066 mL	35.4133 mL
	5 mM	0.7083 mL	3.5413 mL	7.0827 mL
	10 mM	0.3541 mL	1.7707 mL	3.5413 mL

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

#### In Vivo

- Add each solvent one by one: 0.5% CMC-Na/saline water  
 Solubility: 5 mg/mL (17.71 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (8.85 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Tyrphostin A9, a PDGFR inhibitor, is a potent inducer of mitochondrial fission. Tyrphostin A9 emerged as the most potent and selective of 51 tyrosine kinase inhibitors tested against the TNF-induced respiratory burst. Tyrphostin A9 has anti-influenza virus activities.

#### In Vitro

Tyrphostin A9 inhibited TNF-induced tyrosine phosphorylation of pyk2 without blocking the cells' bactericidal activity. Tyrphostin A9 is a PDGF receptor tyrosine kinase inhibitor (IC<sub>50</sub> = 500 nM). Recent findings suggest that signaling via PDGF receptor tyrosine kinases is not necessary for the shift of the smooth muscle cells from a contractile to a synthetic phenotype. On the other hand these enzymes apparently carry out important functions in the control of intracellular membrane traffic and cell division.

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

## CUSTOMER VALIDATION

- Nat Cancer. 2022 Apr;3(4):453-470.

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## REFERENCES

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

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