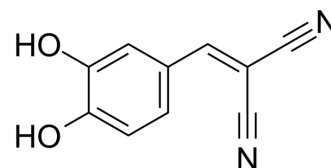


Tyrphostin 23

Cat. No.:	HY-15644		
CAS No.:	118409-57-7		
Molecular Formula:	C ₁₀ H ₆ N ₂ O ₂		
Molecular Weight:	186.17		
Target:	EGFR		
Pathway:	JAK/STAT Signaling; 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 : 100 mg/mL (537.14 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	5.3714 mL	26.8572 mL	53.7143 mL
		5 mM	1.0743 mL	5.3714 mL	10.7429 mL
10 mM		0.5371 mL	2.6857 mL	5.3714 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 (13.43 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (13.43 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Tyrphostin 23 (Tyrphostin A23) is an EGFR inhibitor with an IC ₅₀ and K _i of 35 and 11 μM, respectively.	
IC₅₀ & Target	EGFR 35 μM (IC ₅₀ , Cell Assay)	EGFR 11 μM (K _i)
In Vitro	10 μM tyrphostin 23 causes significant inhibition of the cell proliferation caused by 1 nM and 1 μM ghrelin ^[2] . Tyrphostin 23 (T23) is a well-known inhibitor of protein tyrosine kinases and has been considered as potential anti-cancer drug. T23 is reported to acutely stimulate the glycolytic flux in primary cultured astrocytes. Tyrphostin 23 stimulates glycolytic flux in cultured astrocytes. Mitochondrial metabolism of brain astrocytes is accelerated by Tyrphostin 23 exposure ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

CUSTOMER VALIDATION

- J Virol. 2021 Dec 15;JV10191921.

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REFERENCES

- [1]. Gazit A, et al. Tyrphostins I: synthesis and biological activity of protein tyrosine kinase inhibitors. J Med Chem. 1989 Oct;32(10):2344-52.
- [2]. Nanzer AM, et al. Ghrelin exerts a proliferative effect on a rat pituitary somatotroph cell line via the mitogen-activated protein kinase pathway. Eur J Endocrinol. 2004 Aug;151(2):233-40.
- [3]. Hohnholt MC, et al. The tricarboxylic acid cycle activity in cultured primary astrocytes is strongly accelerated by the protein tyrosine kinase inhibitor tyrphostin 23. Neurochem Int. 2017 Jan;102:13-21.
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Caution: Product has not been fully validated for medical applications. For research use only.

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