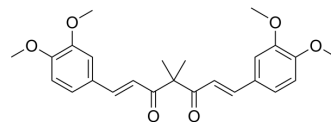


Tetramethylcurcumin

Cat. No.:	HY-N2521
CAS No.:	52328-97-9
Molecular Formula:	C ₂₅ H ₂₈ O ₆
Molecular Weight:	424.49
Target:	STAT; Apoptosis
Pathway:	JAK/STAT Signaling; Stem Cell/Wnt; Apoptosis
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (235.58 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.3558 mL	11.7788 mL	23.5577 mL
	5 mM	0.4712 mL	2.3558 mL	4.7115 mL
	10 mM	0.2356 mL	1.1779 mL	2.3558 mL

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

BIOLOGICAL ACTIVITY

Description

Tetramethylcurcumin (FLLL31), derived from curcumin, specifically suppresses the phosphorylation of STAT3 by binding selectively to Janus kinase 2 and the STAT3 Src homology-2 domain. Tetramethylcurcumin exhibits anti-inflammatory and anti-cancer effects^{[1][2]}.

IC₅₀ & Target

STAT3

In Vitro

Tetramethylcurcumin (FLLL31; 2.5 and 5 μM; for 24 hours) downregulates STAT3 phosphorylation and DNA-binding activity in MDA-MB-231 breast and PANC-1 pancreatic cancer cells^[1].

Tetramethylcurcumin inhibits cell viability, cell invasion. Tetramethylcurcumin is an effective inhibitor of STAT3 phosphorylation, DNA-binding activity, and transactivation in vitro, leading to the impediment of multiple oncogenic processes and the induction of apoptosis in pancreatic and breast cancer cell lines^[1].

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

REFERENCES

[1]. Lin L, et al. Novel STAT3 phosphorylation inhibitors exhibit potent growth-suppressive activity in pancreatic and breast cancer cells. *Cancer Res.* 2010 Mar 15;70(6):2445-54.

[2]. Yuan S, et al. FLLL31, a derivative of curcumin, attenuates airway inflammation in a multi-allergen challenged mouse model. *Int Immunopharmacol.* 2014 Jul;21(1):128-36.

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

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