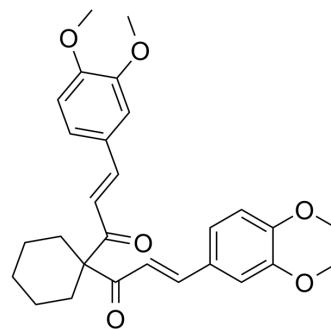


## FLLL32

<b>Cat. No.:</b>	HY-100544
<b>CAS No.:</b>	1226895-15-3
<b>Molecular Formula:</b>	C <sub>28</sub> H <sub>32</sub> O <sub>6</sub>
<b>Molecular Weight:</b>	464.55
<b>Target:</b>	STAT; JAK; Apoptosis
<b>Pathway:</b>	JAK/STAT Signaling; Stem Cell/Wnt; Epigenetics; Protein Tyrosine Kinase/RTK; Apoptosis
<b>Storage:</b>	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (215.26 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.1526 mL	10.7631 mL	21.5262 mL
		5 mM	0.4305 mL	2.1526 mL	4.3052 mL
		10 mM	0.2153 mL	1.0763 mL	2.1526 mL
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (5.38 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.38 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (5.38 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	FLLL32, a synthetic analog of curcumin, is a JAK2/STAT3 dual inhibitor with anti-tumor activity. FLLL32 can inhibit the induction of STAT3 phosphorylation by IFNα and IL-6 in breast cancer cells <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	JAK2/STAT3 <sup>[1]</sup>
<b>In Vitro</b>	FLLL32 specifically reduces STAT3 phosphorylation at Tyr705 (pSTAT3) and induces apoptosis at micromolar amounts in human melanoma cell lines and primary melanoma cultures <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Cancer Gene Ther. 2021 Aug 27.
- Acta Biochim Biophys Sin. 2021 May 21;53(6):697-706.
- Cancer Manag Res. 2020 Nov 24;12:12067-12075.
- Biochem Biophys Res Commun. 2021 May 22;562:43-49.

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## REFERENCES

- [1]. Bill MA, et al. The small molecule curcumin analog FLLL32 induces apoptosis in melanoma cells via STAT3inhibition and retains the cellular response to cytokines with anti-tumor activity. Mol Cancer. 2010 Jun 25;9:165.
- [2]. Lin L, et al. Novel STAT3 phosphorylation inhibitors exhibit potent growth-suppressive activity in pancreaticand breast cancer cells. Cancer Res. 2010 Mar 15;70(6):2445-54.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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