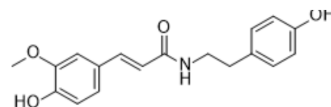


N-trans-Feruloyltyramine

Cat. No.:	HY-N2410
CAS No.:	66648-43-9
Molecular Formula:	C ₁₈ H ₁₉ NO ₄
Molecular Weight:	313.35
Target:	Reactive Oxygen Species; Apoptosis
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (319.13 mM; Need ultrasonic)																	
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent Concentration</th> <th rowspan="2">Mass</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>3.1913 mL</td> <td>15.9566 mL</td> <td>31.9132 mL</td> </tr> <tr> <td>5 mM</td> <td>0.6383 mL</td> <td>3.1913 mL</td> <td>6.3826 mL</td> </tr> <tr> <td>10 mM</td> <td>0.3191 mL</td> <td>1.5957 mL</td> <td>3.1913 mL</td> </tr> </tbody> </table>	Solvent Concentration	Mass	1 mg	5 mg	10 mg	1 mM	3.1913 mL	15.9566 mL	31.9132 mL	5 mM	0.6383 mL	3.1913 mL	6.3826 mL	10 mM	0.3191 mL	1.5957 mL	3.1913 mL
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	Please refer to the solubility information to select the appropriate solvent.																	
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (7.98 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.98 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.98 mM); Clear solution 																	

BIOLOGICAL ACTIVITY

Description	N-trans-Feruloyltyramine (N-feruloyltyramine), an alkaloid, is a potent antioxidant. N-trans-Feruloyltyramine improves H ₂ O ₂ -induced intracellular ROS generation and decreases apoptosis. N-trans-Feruloyltyramine has the potential for oxidative stress-related neurodegenerative conditions and cancer research ^{[1][2]} .
In Vitro	<p>N-trans-Feruloyltyramine (N-feruloyltyramine; 10-500 μM; 3 hours prior H₂O₂) protects the cells against H₂O₂-induced toxicity^[1].</p> <p>N-trans-Feruloyltyramine (25-100 μM; 3 hours prior H₂O₂) with 100 μM significantly reduces Bax and activated caspase-3 levels in H₂O₂-treated SK-N-SH cells^[1].</p> <p>N-trans-Feruloyltyramine significantly improves an H₂O₂-mediated increase in ROS levels^[1].</p>

N-trans-Feruloyltyramine (10-500 μM) does not affect viability of the SK-N-SH cells^[1].
N-trans-Feruloyltyramine (64-320 μM ; 24 hours) shows proliferation inhibition on HepG2 cells with IC_{50} value of 194 μM ^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[1]

Cell Line:	SK-N-SH cells
Concentration:	10, 25, 50, 100, 150, 250, 500 μM
Incubation Time:	For 3 hours prior H_2O_2
Result:	Protected the cells against H_2O_2 (150 μM)-induced toxicity as determined by a significant higher percentage of viability in cells.

Western Blot Analysis^[1]

Cell Line:	SK-N-SH cells
Concentration:	25, 50, 100 μM
Incubation Time:	For 3 hours prior H_2O_2
Result:	Abolished H_2O_2 -induced Bax expression. Significantly decreased activated caspase-3 levels.

REFERENCES

[1]. Rungtip Soi-ampornkul, et al. N-trans-feruloyltyramine Protects Human Neuroblastoma SK-N-SH Cell Line Against H_2O_2 -Induced Cytotoxicity. Natural Product Communications Volume 17, Issue 8, August 2022.

[2]. Xudong Gao, et al. Effects of N-trans-feruloyltyramine isolated from laba garlic on antioxidant, cytotoxic activities and H_2O_2 -induced oxidative damage in HepG2 and L02 cells. Food Chem Toxicol. 2019 Aug;130:130-141.

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

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