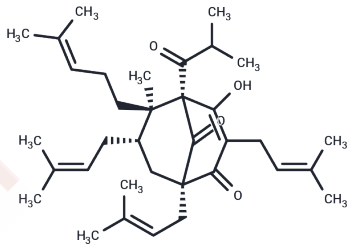
Data Sheet (Cat.No.TN1755)

TargetMol

Hyperforin

Chemical Properties



CAS No. : 11079-53-1

Formula: C35H52O4

Molecular Weight: 536.79

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hyperforin, a natural product from Hypericum, is commonly used as an antidepressant and also has neurological, inflammatory, antimicrobial, antitumor and antiangiogenic effects. Hyperforin acts as a monoamine reuptake inhibitor (MRI) in vitro, including serotonin, norepinephrine, dopamine, GABA, and glutamate, with an IC 50 of ≈0.1 μg/mL. Hyperforin is also capable of inducing the cytochrome P450 enzymes, CYP3A4 and CYP2C9, through binding to and activation of the pregnane X receptor. Hyperforin is capable of activating TRPC6 channels by binding to a specific motif.
Targets(IC50)	Calcium Channel,TRP/TRPV Channel
In vitro	**Methods**: Hyperforin (0.1, 1, 10 μM) was used to treat TNF α-stimulated HaCaT cells, and the expression of related proteins was determined by Western Blot. **Results**: Hyperforin at a dose of 10 μM reduced the expression of p-p38, p-ERK, p-JNK, and p-STAT3 in HaCaT cells. [3]
In vivo	**Methods**: Hyperforin (5 mg/kg, once a day, 7 days) was used to treat IMQ-induced psoriasis-like mouse models to observe whether it improved the skin lesions of psoriasis. **Results**: Hyperforin significantly improved skin lesions throughout the treatment period, while inhibiting the infiltration of CD3+ T cells and downregulating the expression of Il1, Il6, Il23, Il17a, Il22, and antimicrobial peptides (AMPs) in skin lesions. [3]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8629 mL	9.3146 mL	18.6293 mL
5 mM	0.3726 mL	1.8629 mL	3.7259 mL
10 mM	0.1863 mL	0.9315 mL	1.8629 mL
50 mM	0.0373 mL	0.1863 mL	0.3726 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Heiser JH, et al. TRPC6 channel-mediated neurite outgrowth in PC12 cells and hippocampal neurons involves activation of RAS/MEK/ERK, PI3K, and CAMKIV signaling. J Neurochem. 2013 Nov;127(3):303-13.
Pochwat B, et al. Hyperforin Potentiates Antidepressant-Like Activity of Lanicemine in Mice. Front Mol Neurosci. 2018 Dec 12;11:456.
Zhang S, et al. Hyperforin Ameliorates Imiquimod-Induced Psoriasis-Like Murine Skin Inflammation by Modulating IL-17A-Producing γδ T Cells. Front Immunol. 2021 May 5;12:635076.
Adam P, et al. Biosynthesis of hyperforin in Hypericum perforatum. J Med Chem. 2002 Oct 10;45(21):4786-93.
Li XX, et al. Hyperforin: A natural lead compound with multiple pharmacological activities. Phytochemistry. 2023 Feb;206:113526.
Suzhen Chen, et al. "The phytochemical hyperforin triggers thermogenesis in adipose tissue via a Dlat-AMPK signaling axis to curb obesity." Cell Metabolism 33.3 (2021): 565-580.