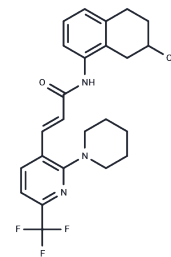


AMG-0347

Chemical Properties

CAS No. : 946615-43-6
 Formula: C₂₄H₂₆F₃N₃O₂
 Molecular Weight: 445.48
 Storage: 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	AMG-0347 (UNII-CD7L9290QR) is a small molecule inhibitor targeting TRPA1 (transient receptor potential ankyrin 1) ion channels, a receptor found in sensory neurons and involved in the detection of pain and environmental stimuli. AMG-0347 acts by blocking the function of TRPA1 and has analgesic effects.
Targets(IC50)	TRP/TRPV Channel
In vitro	The inhibitory effects of AMG-0347 on the activation of TRPV1 channels by heat (45°C), protons (pH5), or capsaicin (500 nM) were evaluated using the 45 Ca ²⁺ uptake assay in Chinese hamster ovary cells stably expressing rat or human TRPV1 channels.[1] AMG-0347 demonstrated potent and selective antagonism against TRPV1 in vitro. Concentration-dependent inhibition was observed with IC ₅₀ values of 0.2 nM for heat-induced activation, 0.8 nM for proton-induced activation, and 0.7 nM for capsaicin-induced activation of rat TRPV1 channels. AMG-0347 did not exhibit blocking activity against other TRP channels, including TRPV2, TRPV3, TRPV4, TRP ankyrin-1, and TRP melastatin-8, with IC ₅₀ values of 10 μM.[1]
In vivo	AMG0347 did not change the withdrawal threshold to mechanical stimulation or the guarding pain score. The withdrawal latency to heat increased from 3 h through 1 day after AMG0347 administration. AMG0347 prevented the decreases in heat withdrawal latency and mechanical withdrawal threshold caused by capsaicin infiltration and prevented the increase in activity caused by intrathecal capsaicin injection.[2]

Solubility Information

Solubility	DMSO: 27.5 mg/mL (61.73 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2448 mL	11.2238 mL	22.4477 mL
5 mM	0.449 mL	2.2448 mL	4.4895 mL
10 mM	0.2245 mL	1.1224 mL	2.2448 mL
50 mM	0.0449 mL	0.2245 mL	0.449 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

Steiner AA, et al. Nonthermal activation of transient receptor potential vanilloid-1 channels in abdominal viscera tonically inhibits autonomic cold-defense effectors. *J Neurosci.* 2007;27(28):7459-7468.

Wu C, et al. Effect of AMG0347, a transient receptor potential type V1 receptor antagonist, and morphine on pain behavior after plantar incision. *Anesthesiology.* 2008;108(6):1100-1108.

Montell C, et al. Thermoregulation: channels that are cool to the core. *Curr Biol.* 2007;17(20):R885-R887.

Steiner AA, et al. Nonthermal activation of transient receptor potential vanilloid-1 channels in abdominal viscera tonically inhibits autonomic cold-defense effectors. *J Neurosci.* 2007;27(28):7459-7468.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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