Product Data Sheet

Product Name: Synta66
Cat. No.: GC33472

Chemical Properties

Cas. No.	835904-51-3		
SMILES	O=C(C1=C(F)C=NC=C1)NC2=CC=C(C3=CC(OC)=CC=C3OC)C=C2		
Formula	$C_{20}H_{17}FN_2O_3$	M.Wt	352.36
Solubility	DMSO : 77.5 mg/mL (219.95 mM);Water : < 0.1 mg/mL (insoluble)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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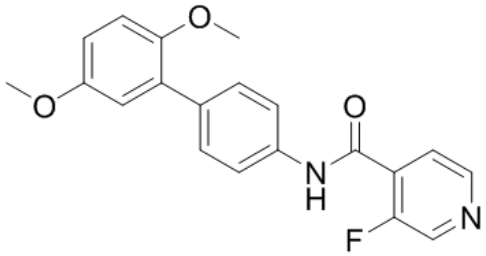
Structure



Protocol

Cell experiment: Human Lung Mast Cell (HLMCs) are cultured in DMEM+Glutamax media containing 1% antibiotic-antimycotic solution, 1% non-essential amino acids, 10% fetal calf serum and supplemented with 100 ng/mL human stem cell factor, 50 ng/mL IL-6 and 10 ng/mL IL-10. For histamine assays mast cells are isolated from human lung tissue and used within 24 h[3].

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References:

[1]. Molnár T, et al. Store-Operated Calcium Entry in Müller Glia Is Controlled by Synergistic Activation of TRPC and Orai Channels. J Neurosci. 2016 Mar 16;36(11):3184-98.
[2]. van Kruchten R, et al. Antithrombotic potential of blockers of store-operated calcium channels in platelets. Arterioscler Thromb Vasc Biol. 2012 Jul;32(7):1717-23.
[3]. Wajdner HE, et al. Orai and TRPC channel characterization in FcεRI-mediated calcium signaling and mediator secretion in human mast cells. Physiol Rep. 2017 Mar;5(5).

Background

Synta66 is an inhibitor of store-operated calcium entry channel Orai, which forms the pore of the CRAC channel, and used for the research of neurological disease.

Synta66 is an inhibitor of Orai, which forms the pore of the CRAC channel. Synta66 (10 μM) attenuates peak SOCE in Müller glia. Synta66 (10 μM) prevents orai channels mediating the residual SOC current in Trpc1-/- Müller cells[1]. Synta66 (10 μM) nearly completely blocks the Ca2+ entry signal evoked by CaCl2 addition, whereas it moderately reduces Ca2+ mobilization from stores with 10% to 30% in platelet. Synta66 (10 μM) suppresses human platelet activation in plasma and whole-blood thrombus formation. Synta66 (10 μM) also inhibits murine platelet responses and thrombus formation[2]. Synta66 (10 μM) inhibits LAD2 human mast cell line. Synta66 (10 μM) significantly inhibits FcεRI stimulated histamine and TNFα secretion, and has differential effects on FcεRI stimulated prostaglandin D2 and cytokine release in human lung mast cells (HLMCs)[3].

[1]. Molnár T, et al. Store-Operated Calcium Entry in Müller Glia Is Controlled by Synergistic Activation of TRPC and Orai Channels. J Neurosci. 2016 Mar 16;36(11):3184-98. [2]. van Kruchten R, et al. Antithrombotic potential of blockers of store-operated calcium channels in platelets. Arterioscler Thromb Vasc Biol. 2012 Jul;32(7):1717-23. [3]. Wajdner HE, et al. Orai and TRPC channel characterization in FcεRI-mediated calcium signaling and mediator secretion in human mast cells. Physiol Rep. 2017 Mar;5(5).