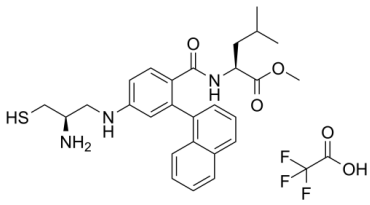
Data Sheet

Product Name:	GGTI298 (Trifluoroacetate)
Cat. No.:	CS-7690
CAS No.:	1217457-86-7
Molecular Formula:	$C_{29}H_{34}F_3N_3O_5S$
Molecular Weight:	593.66
Target:	Apoptosis; Ras
Pathway:	Apoptosis; GPCR/G Protein
Solubility:	DMSO : 150 mg/mL (252.67 mM; Need ultrasonic and warming)



BIOLOGICAL ACTIVITY:

GGTI298 Trifluoroacetate is a CAAZ peptidomimetic geranylgeranyltransferase I (**GGTase I**) inhibitor, which can inhibit **Rap1A** with **IC_{50}** of 3 μM; little effect on **Ha-Ras** with **IC_{50}** of >20 μM. IC50 & Target: IC50: 3 μM (Rap1A, in vivo), > 20 μM (Ha-Ras, in vivo)[3] **In Vitro:** RhoA inhibitor (GGTI298 Trifluoroacetate) significantly reduces cAMP agonist-stimulated apical K+ conductance[1]. Knockdown of DR4 abolishes NF-κB activation, leading to sensitization of DR5-dependent apoptosis induced by the combination of GGTI298 Trifluoroacetate and TRAIL. GGTI298 Trifluoroacetate/TRAIL activates NF-κB and inhibits Akt. Knockdown of DR5, prevents GGTI298/TRAIL-induced IκBα and p-Akt reduction, suggesting that DR5 mediates reduction of IκBα and p-Akt induced by GGTI298/TRAIL. In contrast, DR4 knockdown further facilitates GGTI298/TRAIL-induced p-Akt reduction[2]. **In Vivo:** The vivo mouse ileal loop experiments show fluid accumulation is reduced in a dose-dependent manner by TRAM-34, GGTI298 Trifluoroacetate, or H1152 when inject together with cholera toxin into the loop[1].

PROTOCOL (Extracted from published papers and Only for reference)

Kinase Assay: [2]The given cells are lysed with reporter lysis buffer and subjected to luciferase activity assay using luciferase assay system in a luminometer. Relative luciferase activity is normalized to protein content[2]. **Cell Assay:** [2]Cells are seeded in 96-well cell culture plates and treated the next day with the agents (including GGTI298 Trifluoroacetate). The viable cell number is determined using the sulforhodamine B assay[2]. **Animal Administration:** [1]The ileal loop experiment is performed in 6-8-week-old mice by a modifing rabbit ileal loop assay. Following gut sterilization, the animals are kept fasted for 24 h prior to surgery and fed only water ad libitum. Anesthesia is induced by a mixture of ketamine (35 mg/kg of body weight) and xylazine (5 mg/kg of body weight). A laparotomy is performed, and the experimental loops of 5-cm length are constricted at the terminal ileum by tying with non-absorbable silk. The following fluids are instilled in each loop by means of a tuberculin syringe fitting with a disposable needle through the ligated end of the loop: pure CT (1 μg; positive control), saline (negative control), CT (1 μg)+TRAM-34 (different concentrations in μM), CT (1 μg)+ H1152 (1 μM), and CT (1 μg)+GGTI298 Trifluoroacetate (different concentrations in μM), a specific inhibitor of Rap1A. The intestine is returned to the peritoneum, and the mice are sutured and returned to their cages. After 6 h, these animals are sacrificed by cervical dislocation, and the loops are excised[1].

References:

[1]. Sheikh IA, et al. The Epac1 signaling pathway regulates Cl- secretion via modulation of apical KCNN4c channels in diarrhea. J Biol Chem. 2013 Jul 12;288(28):20404-15.

[2]. Chen S, et al. Dissecting the roles of DR4, DR5 and c-FLIP in the regulation of geranylgeranyltransferase I inhibition-mediated augmentation of TRAIL-induced apoptosis. Mol Cancer. 2010 Jan 29;9:23.

[3]. McGuire TF, et al. Platelet-derived growth factor receptor tyrosine phosphorylation requires protein geranylgeranylation but not farnesylation. J Biol Chem. 1996 Nov 1;271(44):27402-7.

CAIndexNames:

(S)-methyl 2-(4-(((R)-2-amino-3-mercaptopropyl)amino)-2-(naphthalen-1-yl)benzamido)-4-methylpentanoate 2,2,2-trifluoroacetate

SMILES:

CC(C)C[C@@H](C(OC)=O)NC(C1=CC=C(NC[C@@H](N)CS)C=C1C2=C3C=CC=CC3=CC=C2)=O.O=C(O)C(F)(F)F

Tel: 610-426-3128 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA