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## Product Data Sheet

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Product Name: RO2959 hydrochloride

Cat. No.: GC60327

### Chemical Properties

Cas. No. 1219927-22-6

SMILES O=C(NC1=NC=C(C2=C(C)CCN(C3=NC=C(C)S3)C2)N=C1)C4=C(F)C=CC=C4F.[xHCl]Formula  $C_{21}H_{19}F_2N_5OS \cdot xHCl$ 

M.Wt

Solubility

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.

Structure 

### Background

RO2959 hydrochloride is a potent and selective CRAC channel inhibitor with an IC<sub>50</sub> of 402 nM. RO2959 hydrochloride is a potent blocker of store operated calcium entry (SOCE) mediated by Orai1/Stim1 channels with an IC<sub>50</sub> of 25 nM. RO2959 hydrochloride is also a potent inhibitor of human IL-2 production, and potently blocks T cell receptor triggered gene expression and T cell functional pathways[1][2].

RO2959 inhibits Orai1 and Orai3 with IC<sub>50</sub> values of 25 nM and 530 nM, respectively. RO2959 blocks store operated calcium entry (SOCE) in activated CD4<sup>+</sup>T lymphocytes with an IC<sub>50</sub> value of 265 nM[1]. RO2959 is a potent SOCE inhibitor that blocks an IP<sub>3</sub>-dependent current in CRAC-expressing RBL-2H3 cells and CHO cells stably expressing human Orai1 and Stim1, as well as SOCE in human primary CD4<sup>+</sup> T cells triggered by either T cell receptor (TCR) stimulation or thapsigargin treatment. RO2959 completely inhibits cytokine production as well as T cell proliferation mediated by TCR stimulation or MLR (mixed lymphocyte reaction)[1].

[1]. Gang Chen, et al. Characterization of a Novel CRAC Inhibitor That Potently Blocks

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

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Human T Cell Activation and Effector Functions. Mol Immunol. 2013 Jul;54(3-4):355-67.  
[2]. Changbo Zheng, et al. Gastrodin Inhibits Store-Operated Ca<sup>2+</sup> Entry and Alleviates Cardiac Hypertrophy. Front Pharmacol. 2017 Apr 25;8:222.

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