

## Product Data Sheet

Product Name: CCX-777 formic

Cat. No.: GC79226

### Chemical Properties

Cas. No.

Formula  $C_{32}H_{45}N_7O_5S$

M.Wt 639.81

Solubility

Storage Store at -20°C, sealed storage, away from moisture and light

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

CCX-777 formic is an orthosteric binder and partial agonist of CXCR7/ACKR3. CCX-777 formic induces the recruitment of  $\beta$ -arrestin 2 and affects the rebinding of chemokines to ACKR3. CCX-777 formic functions to stabilize the ACKR3 receptor and promotes the formation of a monodisperse, stable complex of the receptor in DDM/CHS micelles. CCX-777 formic is widely used in cancer-related research [1] [2] [3] [4].

In Vitro, CCX-777 formic (20  $\mu$ M; 60 min) effectively prevents the reassociation of CXCL12WT with

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ACKR3WT in Sf9 cells, enabling quantitative analysis of the slow dissociation half-life (102 min) of CXCL12WT from this receptor<sup>[2]</sup>. CCX-777 formic (20  $\mu$ M) specifically blocks the binding of CXCL12WT to ACKR3WT in Sf9 cells<sup>[2]</sup>. CCX-777 formic (33 nM; 15 min) acts as a partial agonist for  $\beta$ -arrestin-2 recruitment to ACKR3 in HEK293S cells, with 52% efficacy relative to CXCL12 and a potency of <sup>[4]</sup>.

### References:

- [1]. Santagata S, et al. CXCR4 and CXCR7 Signaling Pathways: A Focus on the Cross-Talk Between Cancer Cells and Tumor Microenvironment. *Front Oncol.* 2021;11:591386. Published 2021 Apr 15.
- [2]. Gustavsson M, et al. Kinetics of CXCL12 binding to atypical chemokine receptor 3 reveal a role for the receptor N terminus in chemokine binding[J]. *Science signaling*, 2019, 12(598): eaaw3657.
- [3]. Lounsbury N. Advances in CXCR7 modulators[J]. *Pharmaceuticals*, 2020, 13(2): 33.
- [4]. Gustavsson M, et al. Structural basis of ligand interaction with atypical chemokine receptor 3. *Nat Commun.* 2017;8:14135. Published 2017 Jan 18.

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