
Product Data Sheet

Product Name: GX-674
 Cat. No.: GC16545

Chemical Properties

Cas. No. 1432913-36-4

Chemical Name 4-(2-(2-amino-1H-benzo[d]imidazol-5-yl)-4-chlorophenoxy)-2,5-difluoro-N-(1,2,4-thiadiazol-5-yl)benzenesulfonamide

SMILES C1C=CC(C2=CC(N=C(N)N3)=C3C=C2)=C(OC4=C(F)C=C(S(NC5=NC=NS5)(=O)=O)C(F)=C4)C=C1

Formula $C_{21}H_{13}ClF_2N_6O_3S_2$ M.Wt 534.95

Solubility Soluble in DMSO 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

GX-674 is an aryl sulfonamide class of antagonist that inhibits Nav1.7 channel with an IC₅₀ value of 0.1nM [1]. GX-674 binds to the chimeric VSD4-NavAb channel with high affinity and inhibits the inactivation of VSD4, thereby stabilizing the inactivated state of Nav1.7 [2]. GX-674 has been widely used as a model compound to investigate the interaction between mutant R1608A and GX-674, as well as to analyze the binding sites that affect the selectivity of the drug in the biochemical experiments [3].

References:

[1] Payandeh J, Hackos D H. Selective ligands and drug discovery targeting the voltage-gated sodium channel Nav1. 7[J]. Voltage-gated Sodium Channels: Structure, Function and Channelopathies, 2018: 271-306.

[2] Ahuja S, Mukund S, Deng L, et al. Structural basis of Nav1. 7 inhibition by an isoform-

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

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selective small-molecule antagonist[J]. Science, 2015, 350(6267): aac5464.

[3] Pukkanasut P, Jaskula-Sztul R, Gomora J C, et al. Therapeutic targeting of voltage-gated sodium channel NaV1.7 for cancer metastasis[J]. Frontiers in Pharmacology, 2024, 15: 1416705.

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