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DATASHEET

CHIR 99021 trihydrochloride

Product overview

Name CHIR 99021 trihydrochloride

Cat No HB1262

Alternative names Laduviglusib, CT99021, CHIR99021

Biological action Inhibitor >98%

Description Potent, selective GSK3 inhibitor and Wnt signaling activator. Commonly used in organoid production

and involved in reprogramming MEFs to IPSCs and fibroblasts to mature neurons. Water soluble.

Biological Data

Biological description

Potent, selective and ATP-competitive GSK3 β inhibitor (IC₅₀ values are 6.7 and 10 nM for GSK-3 β and GSK-3 α respectively).

Water soluble hydrochloride salt of CHIR 99021.

Wnt signaling activator which is commonly used with PD 032501 as part of the 2i condition.

Exhibits no cross reactivity against CDKs and exhibits >500-fold selectivity for GSK3 over other protein kinases and >800-fold selectivity over 20+ other enzymes and receptors.

Promotes self-renewal of embryonic stem cells and enables mouse embryonic fibroblast (MEF) reprogramming into iPSCs.

Commonly used in organoid production and also involved in reprogramming of fibroblasts to mature neurons.

Solubility & Handling

Solubility overview Storage instructions Storage of solutions

Shipping Conditions

Important

Soluble in water (25mM) and in DMSO (50mM)

-20°C

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Stable for ambient temperature shipping. Follow storage instructions on receipt.

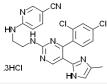
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name

6-[[2-[[4-(2,4-Dichlorophenyl)-5-(5-methyl-1*H*-imidazol-2-yl)-2-pyrimidinyl]amino]ethy l]amino]-3-pyridinecarbonitrile trihydrochloride

Molecular Weight Chemical structure 574.72



Molecular Formula $C_{22}H_{18}Cl_2N_8.3HCl$ CAS Number1782235-14-6PubChem identifier78243722

Source Synthetic

InChi InChi=1S/C22H18Cl2N8.3ClH/c1-13-10-29-21(31-13)17-12-30-22(32-20(17)16-4-3-15(23)8-18(16)2

4)27-7-6-26-19-5-2-14 (9-25)11-28-19;;;/h2-5,8,10-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,31)(H,27,30,32);3-12H,6-7H2,1H3,(H,26,28)(H,29,21)(H,27,20,21);3-12H,6-7H2,1H3,(H,26,28)(H,29,21)(H,27,20,21);3-12H,6-7H2,1H3,(H,26,28)(H,29,21)(H,27,20,21);3-12H,6-7H2,1H3,(H,26,28)(H,29,21)(H,27,20,21);3-12H,6-7H2,1H3,(H,26,28)(H,29,21)(H,27,20,21);3-12H,6-7H2,1H3,(H,26,28)(H,29,21)(H,27,20,21);3-12H,6-7H2,1H3,(H,26,28)(H,2

*1H

InChiKey DSFVSCNMMZRCIA-UHFFFAOYSA-N

MDL number MFCD11846251

References

The roles of Notch3 on the cell proliferation and apoptosis induced by CHIR99021 in NSCLC cell lines: a functional link between Wnt and Notch signaling pathways.

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Generation of human-induced pluripotent stem cells in the absence of exogenous Sox2.

Li W et al (2009) Stem cells 27(12)

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Pleiotropy of glycogen synthase kinase-3 inhibition by CHIR99021 promotes self-renewal of embryonic stem cells from refractory mouse strains.

Ye S et al (2012) PLoS One 7(4)

PubMedID 22540008