Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@hellobio.com

DATASHEET

CHIR 99021 trihydrochloride

Product overview

Name	CHIR 99021 trihydrochloride
Cat No	HB1262
Alternative names	Laduviglusib, CT99021, CHIR99021
Biological action	Inhibitor
Purity	>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 (IC_{50} values are 6.7 and 10 nM for GSK-3β and GSK-3α 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.

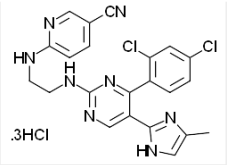
Commonly used in organoid production and also involved in reprogramming of fibroblasts to mature neurons.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (25mM) and in DMSO (50mM)
Important	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]ethyl]amino]-3-pyridinecarbonitrile trihydrochloride
Molecular Weight	574.72
Chemical structure	



Molecular Formula	$C_{22}H_{18}Cl_2N_8.3HCl$
CAS Number	1782235-14-6
PubChem identifier	78243722
SMILES	CC1=CN=C(N1)C2=CN=C(N=C2C3=C(C=C(C=C3)Cl)Cl)NCCNC4=NC=C(C=C4)C#N.Cl.Cl.Cl
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)24)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*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.

Li C *et al* (2013) PLoS One 8(12)
PubMedID 24367688

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

Li W *et al* (2009) Stem cells 27(12)
PubMedID 19839055

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