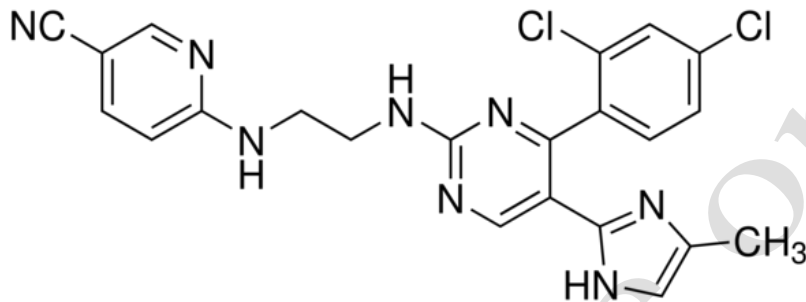


CHIR99021

Cat # NB-42-01302-2mg size: 2mg

Cat # NB-42-01302-5mg size: 5mg

Cat # NB-42-01302-10mg size: 10mg



Product Information

Synonyms:	6-[[2-[[4-(2,4-Dichlorophenyl)-5-(5-methyl-1H-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-pyridinecarbonitrile, CT99021 , GSK-3 Inhibitor XVI
Batch Molecular Formula:	C ₂₂ H ₁₈ Cl ₂ N ₈
Batch Molecular Weight:	465.34
CAS No.:	[252917-06-9]
Physical Appearance:	Off-white to beige solid
MDL Number:	MFCD11846251
Storage:	-20°C
Solubility:	DMSO: 2 mg/mL, clear (warmed)

Biological activity

CHIR99021 is an aminopyrimidine derivative. CHIR99021 promotes self-renewal potential of embryonic stem cells (ESCs) of mice by inhibiting glycogen synthase kinase-3 (GSK-3) activity and potentiates the upregulation of β -catenin and c-Myc functions. CHIR99021 promotes self-renewal of ESCs by modulating transforming growth factor β (TGF- β), Notch and mitogen-activated protein kinases (MAPK) signaling pathways. CHIR99021 is an agonist of wntless/integrated (wnt) signalling, upregulates cyclinA expression and promotes cell proliferation in non-small-cell lung cancer (NSCLC) cell lines.

CHIR99021 is a very potent inhibitor of Glycogen synthase kinase 3 (GSK3, IC₅₀ values for GSK3 α and GSK3 β = 10 and 6.7 nM, respectively). There is no cross-reactivity against CDKs. CHIR99021 potentiates self-renewal of human and mouse embryonic stem cells, and enhances reprogramming of somatic cells into stem cells.

Application

- in cocktail with small molecules to convert human lung fibroblast cells into neurons
- as a culture medium supplement in potassium supplemented simplex optimization medium (KSOM) for the culture of blastocysts
- for chronic inhibition of GSK-3 to investigate its role in corticogenesis

For Research use only. Not for human use