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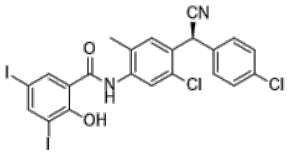
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	FICD inhibitor C22
Cat. No.	:	PC-24463
CAS No.	:	2256089-90-2
Molecular Formula	:	$C_{22}H_{14}Cl_2I_2N_2O_2$
Molecular Weight	:	663.07
Target	:	Other Targets
Solubility	:	10 mM in DMSO



CAS: 2256089-90-2

Biological Activity

FICD inhibitor C22 is a specific, cell-permeable inhibitor of the AMP transferase FICD, significantly inhibits endogenous FICD-mediated BiP AMPylation (IC50=7.27 uM) while weakly inhibiting BiP deAMPylation.
C22 may bind to the dimer interface of endogenous FICD and prevent the dimeric deAMPylase-competent FICD from adopting an AMPylase-competent conformation.
C22 is noncytotoxic that do not trigger the UPRER and are effective against pathogenic FICD mutants in vitro.
C22 improves proinsulin folding and secretion in pancreatic β cells by reducing basal BiP AMPylation.
Human FICD, also referred to as Huntingtin yeast-interacting partner E (HYPE), localizes to the ER lumen and is N-glycosylated on Asn275.

References

Chatterjee BK, et al. ACS Chem Biol. 2025 Mar 4. doi: 10.1021/acschembio.4c00847.

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