OICR-40155: A chemical handle for DCAF1

Version 1.0 (24th April 2025)

Web link for more details: https://www.thesgc.org/chemical-handles/oicr-40155

Overview

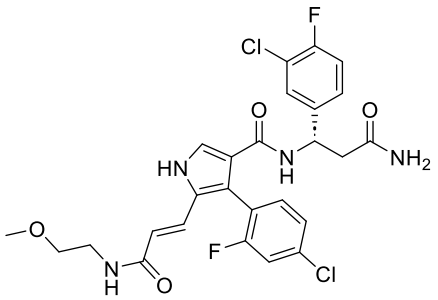
The Structural Genomics Consortium (SGC) in collaboration with the Drug Discovery Program at the Ontario Institute for Cancer Research (OICR) has discovered a chemical handle OICR-40155 for DCAF1 (DDB1-Cul4 associated factor 1).

Summary

Chemical handle name	OICR-40155
Negative control compound	Please see comments on website for designing a negative control.
Target(s) (synonyms)	DCAF1 (VprBP)
Recommended *in vitro* assay concentration	N/A
Suitability for *in* vivo use and recommended dose	Handles are not for in vivo use
Publications	
Related chemical probe	**OICR-41103**
In vitro assay(s) used to characterise	SPR, DSF
Cellular assay(s) for target-engagement	NanoBRET, HiBiT CETSA
ChemicalProbes.org	

Chemical Handle Structure and Use

OICR-40155



SMILES: FC1=C(C=CC(Cl)=C1)C(C(C(N[C@H](C2=CC(Cl)=C(F)C=C2)CC(N)=O)=O)=CN3)=C3/C=C/C(NCCOC)=O
InChiKey: GUWRELPYWXMMMM-WMWRJIBUSA-N
Molecular weight: 565.4
Storage: As a dry powder or as DMSO stock solutions (10 mM) at -20 °C.
DMSO stocks beyond 3-6 months or 2 freeze/thaw cycles should be tested for activity before use
Dissolution: Soluble in DMSO up to 50 mM; use only 1 freeze/thaw cycle per aliquot

Chemical Handle Profile

In vitro Potency & Selectivity: In a SPR assay, OICR-40155 binds DCAF1 (WDR) with K_D = 8 nM.

Potency in Cells and Cellular Target Engagement: In an intact cell-based nanoBRET assay, OICR-40155 inhibited the interaction between DCAF1 WDR and a tracer (based on a literature DCAF1 ligand) with EC_{50} > 1 μM.