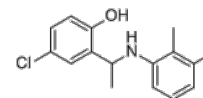


Product Name : MF18
Cat. No. : PC-49095
CAS No. : 694488-83-0
Molecular Formula : C₁₆H₁₈ClNO
Molecular Weight : 275.776
Target : Other Targets
Solubility : 10 mM in DMSO



Biological Activity

MF18 is a small molecule inhibitor of mitochondrial fusion via **mitofusins (MFN1 and MFN2)**, concentration-responsively decreases mitochondrial aspect ratio (Mito AR) in MEFs with EC₅₀ of 4.8 μM.

MF18 shows a comparable concentration-dependent reduction of the mitochondrial aspect ratio to that of 398-418 Gly peptide.

MF18 inhibits mitochondrial fusion in a MFN1/2 dependent manner, binds to the HR2 domain of MFN2 with KD of 7.6 μM in microscale thermophoresis (MST) assay.

MF18 induces mitochondrial outer membrane permeabilization (MOMP) and subsequent activation of caspases 3/7, induces DNA damage in U2OS cells.

MF18 reduced respiration and mitochondrial ATP production in WT but not in Mfn1/Mfn2 DKO MEFs, does not alter the ratio of state III/state II respiration of isolated mitochondria.

MF18 induces minority MOMP and cytochrome c release leading to caspase 3/7 activation, sensitize cells to apoptotic cell death in combination with SMAC-mimetic BV6.

References

Zacharioudakis E, et al. *Nat Commun.* 2022 Jul 7;13(1):3775.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

E-mail: tech@probechem.com