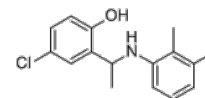


Product Name : MFI8
Cat. No. : PC-49095
CAS No. : 694488-83-0
Molecular Formula : C₁₆H₁₈ClNO
Molecular Weight : 275.776
Target : Other Targets
Solubility : 10 mM in DMSO



Biological Activity

MFI8 (Mitochondrial Fusion Inhibitor 8) 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 μ M. MFI8 shows a comparable concentration-dependent reduction of the mitochondrial aspect ratio to that of 398-418 Gly peptide.

MFI8 inhibits mitochondrial fusion in a MFN1/2 dependent manner, binds to the HR2 domain of MFN2 with KD of 7.6 μ M in microscale thermophoresis (MST) assay.

MFI8 induces mitochondrial outer membrane permeabilization (MOMP) and subsequent activation of caspases 3/7, induces DNA damage in U2OS cells.

MFI8 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.

MFI8 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!

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