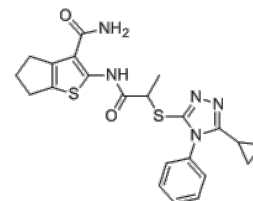


Product Name : MASM7
Cat. No. : PC-49094
CAS No. : 920868-45-7
Molecular Formula : C₂₂H₂₃N₅O₂S₂
Molecular Weight : 453.579
Target : Other Targets
Solubility : 10 mM in DMSO



Biological Activity

MASM7 is a small molecule activator of mitochondrial fusion via **mitofusins (MFN1 and MFN2)**, concentration-responsively increases mitochondrial aspect ratio (Mito AR) in MEFs with EC₅₀ of 75 nM, directly and specifically modulates MFN1/2 fusogenic activity.

MASM7 showed more potent induction of mitochondrial fusion in cells than the 367-384Gly peptide (EC₅₀=340 nM).

MASM7 directly and specifically interacts with the HR2 domain of MFN2 with K_d of 1.1 μM in microscale thermophoresis (MST) assays, does not bind to MFN2-HR2 D725A/L727A mutants.

MASM7 induces stabilization of MFN2 in cellular extract thermal shift assay (CETSA), but not of L727A Mfn2 mutant, does not alter Mfn1 and Mfn2 gene expression and their corresponding protein levels.

MASM7 increases basal and maximal respiration and mitochondrial ATP production in WT but not in Mfn1/Mfn2 DKO MEFs.

MASM7 can activate both MFN2 and MFN1.

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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