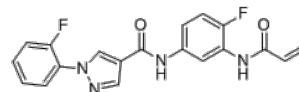


Product Name : Autophagy activator EN6
Cat. No. : PC-72988
CAS No. : 1808714-73-9
Molecular Formula : C₁₉H₁₄F₂N₄O₂
Molecular Weight : 368.344
Target : Autophagy
Solubility : 10 mM in DMSO



Biological Activity

Autophagy activator EN6 (EN6) is a small-molecule in vivo activator of **autophagy**, covalently targets cysteine 277 in the ATP6V1A subunit of the **lysosomal v-ATPase** (vacuolar H⁺-ATPase).

The lysosomal v-ATPase (vacuolar H⁺-ATPase) activates mTORC1 via the Rag guanosine triphosphatases.

EN6 displaced tetramethylrhodamine-5-iodoacetamide dihydroiodide (IA-rhodamine) labeling from recombinant human ATP6V1A protein with IC₅₀ of 1.7 uM.

EN6-mediated ATP6V1A modification decouples the v-ATPase from the Rags, leading to inhibition of mTORC1 signaling, increased lysosomal acidification and activation of autophagy.

EN6 clears TDP-43 aggregates, a causative agent in frontotemporal dementia, in a lysosome-dependent manner.

References

Chung CY, et al. *Nat Chem Biol.* 2019 Jul 8. doi: 10.1038/s41589-019-0308-4.

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

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