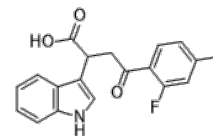


**Product Name** : Mitochonic acid 5  
**Cat. No.** : PC-24789  
**CAS No.** : 1354707-41-7  
**Molecular Formula** : C<sub>18</sub>H<sub>13</sub>F<sub>2</sub>NO<sub>3</sub>  
**Molecular Weight** : 329.30  
**Target** : Other Targets  
**Solubility** : 10 mM in DMSO



## Biological Activity

Mitochonic acid 5 (MA-5) is a synthesized indole derivative targeting the mitochondrial protein mitofilin, modulates mitochondrial ATP synthesis independently of oxidative phosphorylation and the electron transport chain. Mitochonic acid 5 (MA-5) facilitates ATP production and reduces the level of mitochondrial reactive oxygen species (ROS) without affecting activity of mitochondrial complexes I-IV.

MA-5 facilitates mitochondrial ATP production and reduces ROS independent of ETC by facilitating ATP synthase oligomerization and supercomplex formation with mitofilin/Mic60.

Mitochonic acid 5 (MA-5) improves renal function in an ischemia-reperfusion injury model and a cisplatin-induced nephropathy model. In Hep3B cells.

Overexpression of mitofilin increased the basal ATP level, and treatment with MA-5 amplified its effect.

Mitochonic acid 5 (MA-5) improves the reduced cardiac and renal mitochondrial respiration and seems to prolong survival in unique mitochondrial disease model (Mitomice with mitochondrial DNA deletion that mimics typical human mitochondrial disease phenotype).

Mitochonic acid 5 (MA-5) increases cellular ATP level and survival of fibroblasts from patients with mitochondrial disease.

## References

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Suzuki T, et al. J Am Soc Nephrol. 2016 Jul;27(7):1925-32.

Matsushashi T, et al. EBioMedicine. 2017 Jun;20:27-38.

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

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