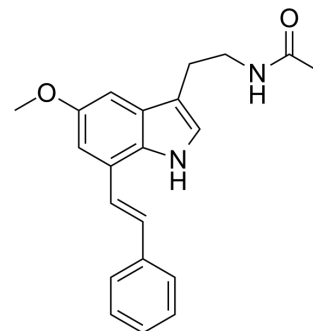


MD6a

Cat. No.:	HY-162363
Molecular Formula:	C ₂₁ H ₂₂ N ₂ O ₂
Molecular Weight:	334.41
Target:	PARP
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	MD6a is a melatonin derivative with inhibitory activity towards PARP-1, which maintains protein homeostasis and improves mitochondrial function through TOR/HSF-1 signaling. MD6a has a neuroprotective effect ^[1] .								
In Vitro	<p>MD6a (10 μM) inhibits PARP-1 to downregulate let-363/hsf-1 signaling by targeting hsp-4 and hsp-6, thus reducing α-syn aggregation and enhancing mitochondrial function in <i>C. elegans</i>^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Real Time qPCR^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>wildtype N2, NL5901, <i>parp-1</i> RNAi</td> </tr> <tr> <td>Concentration:</td> <td>10 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>48 h</td> </tr> <tr> <td>Result:</td> <td>Reduced levels of <i>parp-1</i> mRNA, <i>parp-1</i> dependent α-syn aggregation and mitochondrial ROS levels.</td> </tr> </table>	Cell Line:	wildtype N2, NL5901, <i>parp-1</i> RNAi	Concentration:	10 μM	Incubation Time:	48 h	Result:	Reduced levels of <i>parp-1</i> mRNA, <i>parp-1</i> dependent α-syn aggregation and mitochondrial ROS levels.
Cell Line:	wildtype N2, NL5901, <i>parp-1</i> RNAi								
Concentration:	10 μM								
Incubation Time:	48 h								
Result:	Reduced levels of <i>parp-1</i> mRNA, <i>parp-1</i> dependent α-syn aggregation and mitochondrial ROS levels.								

REFERENCES

[1]. Ma QW, et al., Melatonin derivative 6a as a PARP-1 inhibitor for the treatment of Parkinson's disease. *Front Pharmacol.* 2024 Feb 27;15:1363212.

Caution: Product has not been fully validated for medical applications. For research use only.

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