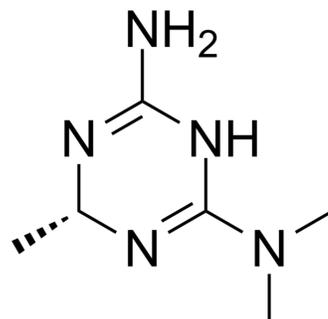


## Imeglimin

Cat. No.:	HY-14771
CAS No.:	775351-65-0
Molecular Formula:	C <sub>6</sub> H <sub>13</sub> N <sub>5</sub>
Molecular Weight:	155.2
Target:	Mitochondrial Metabolism; Reactive Oxygen Species
Pathway:	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Imeglimin (EMD 387008) is an oral glucose-lowering agent. Imeglimin improves insulin sensitivity. Imeglimin also reduces reactive oxygen species (ROS) production, increases mitochondrial DNA and improves mitochondrial function <sup>[1]</sup> .								
<b>IC<sub>50</sub> &amp; Target</b>	ROS; mitochondrial function <sup>[1]</sup>								
<b>In Vitro</b>	<p>Preincubation with Imeglimin (10 mM for 4 h or 100 μM for 24 h) fully prevents tert-butylhydroperoxide (tBH)-induced cell death<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>Human endothelial cells (HMEC-1)</td> </tr> <tr> <td>Concentration:</td> <td>100 μM and 10 mM</td> </tr> <tr> <td>Incubation Time:</td> <td>100 μM for 24 h, 10 mM for 4 h</td> </tr> <tr> <td>Result:</td> <td>Prevention of cell death.</td> </tr> </table>	Cell Line:	Human endothelial cells (HMEC-1)	Concentration:	100 μM and 10 mM	Incubation Time:	100 μM for 24 h, 10 mM for 4 h	Result:	Prevention of cell death.
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<b>In Vivo</b>	<p>Imeglimin (200 mg/kg b.i.d. by oral gavage during the last 6 weeks of HFHSD feeding) significantly decreases hyperglycemia, restores normal glucose tolerance, and improves insulin sensitivity<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Male C57BL/6J0laHsd mice (4 weeks old)<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>200 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Oral gavage; b.i.d.; 6 weeks</td> </tr> <tr> <td>Result:</td> <td>A slight decrease in body weight and food intake associated with some diarrhea was observed but only during the first few days of treatment.</td> </tr> </table>	Animal Model:	Male C57BL/6J0laHsd mice (4 weeks old) <sup>[1]</sup>	Dosage:	200 mg/kg	Administration:	Oral gavage; b.i.d.; 6 weeks	Result:	A slight decrease in body weight and food intake associated with some diarrhea was observed but only during the first few days of treatment.
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### CUSTOMER VALIDATION

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- Diabetes. 2021 Sep 29;db210123.
  - Mol Neurobiol. 2022 Mar 7.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

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[1]. Vial G, et al. Imeglimin normalizes glucose tolerance and insulin sensitivity and improves mitochondrial function in liver of a high-fat, high-sucrose diet mice model. Diabetes. 2015 Jun;64(6):2254-64.

[2]. Detaille D, et al. Imeglimin prevents human endothelial cell death by inhibiting mitochondrial permeability transition without inhibiting mitochondrial respiration. Cell Death Discov. 2016 Jan 18;2:15072.

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

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