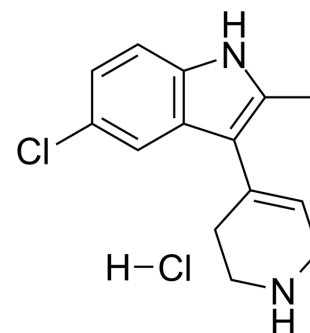


## EMD386088

Cat. No.:	HY-103130
CAS No.:	1171123-46-8
Molecular Formula:	C <sub>14</sub> H <sub>16</sub> Cl <sub>2</sub> N <sub>2</sub>
Molecular Weight:	283.2
Target:	5-HT Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	EMD386088 is a potent serotonin 6 receptor (5-HT <sub>6</sub> R) agonist. EMD386088 induces cell death. EMD386088 regulates the activity of ERK1/2. EMD386088 has the potential for the research of alzheimer's disease (AD) and schizophrenia <sup>[1][2][3]</sup> .																
<b>IC<sub>50</sub> &amp; Target</b>	5-HT <sub>6</sub> Receptor																
<b>In Vitro</b>	<p>EMD386088 (1, 10, 60 μM; 0-18 h) induces cell death in a dose- and time- dependent manner<sup>[1]</sup>.            EMD386088 (1, 10, 60 μM) regulates the activity of ERK1/2 in a 5-HT<sub>6</sub>R-dependent and 5-HT<sub>6</sub>R-independent manner<sup>[1]</sup>.            MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>HEK/HA-5-HT<sub>6</sub>R, native HEK293 cells</td> </tr> <tr> <td>Concentration:</td> <td>1, 10, 60 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>0-18 h</td> </tr> <tr> <td>Result:</td> <td>Induced cell death in HEK293 cells stably expressing HA-5-HT<sub>6</sub>R (HEK/HA-5-HT<sub>6</sub>R) and in native HEK293 cells in a dose- and time- dependent manner.</td> </tr> </table> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>HEK/HA-5-HT<sub>6</sub>R, native HEK293 cells</td> </tr> <tr> <td>Concentration:</td> <td>1, 10, 60 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>0-18 h</td> </tr> <tr> <td>Result:</td> <td>Led to the activation of ERK1/2 at 0-30 μM, retarded ERK1/2 activation at a high dose of 60 μM in HEK/HA-5-HT<sub>6</sub>R cells.</td> </tr> </table>	Cell Line:	HEK/HA-5-HT <sub>6</sub> R, native HEK293 cells	Concentration:	1, 10, 60 μM	Incubation Time:	0-18 h	Result:	Induced cell death in HEK293 cells stably expressing HA-5-HT <sub>6</sub> R (HEK/HA-5-HT <sub>6</sub> R) and in native HEK293 cells in a dose- and time- dependent manner.	Cell Line:	HEK/HA-5-HT <sub>6</sub> R, native HEK293 cells	Concentration:	1, 10, 60 μM	Incubation Time:	0-18 h	Result:	Led to the activation of ERK1/2 at 0-30 μM, retarded ERK1/2 activation at a high dose of 60 μM in HEK/HA-5-HT <sub>6</sub> R cells.
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<b>In Vivo</b>	<p>EMD386088 (1, 5, 10 mg/kg) impairs both short-term memory (STM) and long-term memory (LTM) at 5 mg/kg, but produces no significant effects at 10 mg/kg in male Wistar rats<sup>[2]</sup>.            EMD386088 (0, 2, 4 mg/kg) significantly impairs spontaneous alternation performance in at 2 mg/kg, but the high dose of 4 mg/kg dose not reach significance in C57BL/6J mice<sup>[3]</sup>.            MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>																

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## REFERENCES

- [1]. Yun HM, et al. 5-HT6 receptor ligands, EMD386088 and SB258585, differentially regulate 5-HT6 receptor-independent events. *Toxicol In Vitro*. 2011 Dec;25(8):2035-40.
- [2]. Meneses A, et al. The effects of the 5-HT(6) receptor agonist EMD and the 5-HT(7) receptor agonist AS19 on memory formation. *Behav Brain Res*. 2008 Dec 16;195(1):112-9.
- [3]. Amodeo DA, et al. 5-HT6 receptor agonist EMD386088 impairs behavioral flexibility and working memory. *Behav Brain Res*. 2018 Sep 3;349:8-15.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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