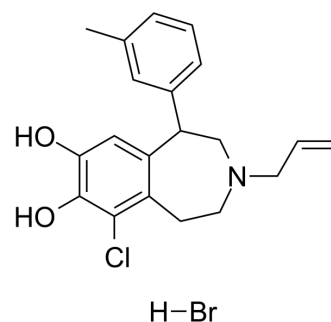


## SKF83822 hydrobromide

Cat. No.:	HY-103411
CAS No.:	74115-10-9
Molecular Formula:	C <sub>20</sub> H <sub>23</sub> BrClNO <sub>2</sub>
Molecular Weight:	424.76
Target:	Dopamine 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>	SKF83822 hydrobromide is a potent dopamine D1 receptor agonist. SKF83822 hydrobromide activates G <sub>s</sub> /olf/adenylyl cyclase (AC)-coupled D1 receptors, but not phospholipase C (PLC)-coupled D1-like receptors <sup>[1]</sup> .								
<b>IC<sub>50</sub> &amp; Target</b>	D <sub>1</sub> Receptor								
<b>In Vitro</b>	<p>SKF83822 (1 μM) increases DARPP-32 phosphorylation in Neostriatal slices. Treatment with SKF83822 for 5 min stimulates DARPP-32 Thr34 phosphorylation maximally at a concentration of 100 μM with a half maximal effect at -1 μM. SKF83822 (1 μM) does not affect the phosphorylation of DARPP-32 at Thr75, Ser97 or Ser130<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis<sup>[1]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>Neostriatal slices</td> </tr> <tr> <td>Concentration:</td> <td>1 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>0, 0.5, 2, 5, and 10 minutes</td> </tr> <tr> <td>Result:</td> <td>Treatment with 1 μM increased the level of phospho-Thr34 DARPP-32, maximally by 6-fold within 2 min of incubation.</td> </tr> </table>	Cell Line:	Neostriatal slices	Concentration:	1 μM	Incubation Time:	0, 0.5, 2, 5, and 10 minutes	Result:	Treatment with 1 μM increased the level of phospho-Thr34 DARPP-32, maximally by 6-fold within 2 min of incubation.
Cell Line:	Neostriatal slices								
Concentration:	1 μM								
Incubation Time:	0, 0.5, 2, 5, and 10 minutes								
Result:	Treatment with 1 μM increased the level of phospho-Thr34 DARPP-32, maximally by 6-fold within 2 min of incubation.								
<b>In Vivo</b>	<p>SKF83822 activates dopamine D1 receptors coupled to G<sub>s</sub>/olf and downstream cyclase activity. SKF83822 produces a locomotor response in both rodent and non-human primate models without affecting stereotypy, intense grooming, or dyskinesia. An acute injection of SKF83822 (0.4 mg/kg; i.p.) induced a greater than threefold increase in locomotor activity relative to the baseline period for each genotype<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>G<sub>αq</sub> knockout mice<sup>[1]</sup></td> </tr> <tr> <td>Dosage:</td> <td>0.4 mg/kg</td> </tr> <tr> <td>Administration:</td> <td></td> </tr> <tr> <td>Result:</td> <td>There was a significant increase in locomotor activity in each genotype.</td> </tr> </table>	Animal Model:	G <sub>αq</sub> knockout mice <sup>[1]</sup>	Dosage:	0.4 mg/kg	Administration:		Result:	There was a significant increase in locomotor activity in each genotype.
Animal Model:	G <sub>αq</sub> knockout mice <sup>[1]</sup>								
Dosage:	0.4 mg/kg								
Administration:									
Result:	There was a significant increase in locomotor activity in each genotype.								

---

## REFERENCES

---

- [1]. Mahomi Kuroiwa, et al. Regulation of DARPP-32 phosphorylation by three distinct dopamine D1-like receptor signaling pathways in the neostriatum. *J Neurochem.* 2008 Nov;107(4):1014-26.
- [2]. Aliya L Frederick, et al. Neurobehavioral phenotyping of G( $\alpha$ q) knockout mice reveals impairments in motor functions and spatial working memory without changes in anxiety or behavioral despair. *Front Behav Neurosci.* 2012 Jun 19;6:29.
- 

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA