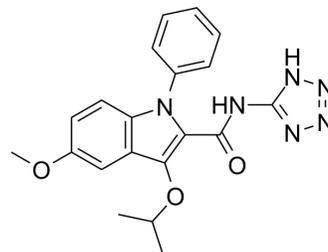


## CI-949

Cat. No.:	HY-U00364
CAS No.:	104961-19-5
Molecular Formula:	C <sub>20</sub> H <sub>20</sub> N <sub>6</sub> O <sub>3</sub>
Molecular Weight:	392.41
Target:	Histamine Receptor; Prostaglandin Receptor; Leukotriene Receptor
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



## BIOLOGICAL ACTIVITY

<b>Description</b>	CI-949 is an allergic mediator release inhibitor, which inhibits histamine, leukotriene C <sub>4</sub> /D <sub>4</sub> (LTC <sub>4</sub> /LTD <sub>4</sub> ), and thromboxane B <sub>2</sub> (TXB <sub>2</sub> ) release with IC <sub>50</sub> s of 11.4 μM, 0.5 μM and 0.1 μM, respectively.			
<b>IC<sub>50</sub> &amp; Target</b>	Histamine	TXB <sub>2</sub> 0.1 μM (IC <sub>50</sub> )	LTC <sub>4</sub> 0.5 μM (IC <sub>50</sub> )	LTD <sub>4</sub> 0.5 μM (IC <sub>50</sub> )
<b>In Vitro</b>	<p>CI-949 inhibits, in a dose-dependent manner, the release of histamine, leukotriene, and thromboxane from human basophilic leukocytes challenged with anti-IgE. The IC<sub>50</sub> for inhibition of histamine release is 11.4 μM. Virtually complete inhibition of histamine release occurs at 100 μM, with negligible inhibition of release &lt;3 μM. Both LTC<sub>4</sub>/LTD<sub>4</sub> and TXB<sub>2</sub> release are inhibited at lower concentrations (IC<sub>50</sub>, 0.5 and 0.1 μM, respectively). Complete inhibition of leukotriene and thromboxane synthesis/release is obtained with 10 and 1 μM of CI-949, respectively. CI-949 is an effective inhibitor of release of all three mediators in response to this stimulus. The IC<sub>50</sub>s for inhibition of histamine, leukotriene, and thromboxane are 6.3, 2, and 0.1 μM for FMLP challenge<sup>[1]</sup>. CI-949 effectively inhibits the release of histamine and the synthesis or release of immunoreactive sulfidopeptide leukotrienes C<sub>4</sub>-D<sub>4</sub> and thromboxane B<sub>2</sub> from antigen-challenged lung fragments of actively sensitized guinea-pigs. The IC<sub>50</sub>s are 26.7±2.8 μM for histamine, 2.7±2.4 μM for leukotriene, and 3.0±1.8 μM for thromboxane<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>			
<b>In Vivo</b>	<p>Actively sensitized guinea-pigs are given i.p. doses of 30, 50, or 100 mg/kg of CI-949 between 20-120 min before aerosol challenge with antigen. A dose of 50 mg/kg i.p. of CI-949 protects conscious, aerosol-allergen challenged guinea-pigs for at least 1 h and 100 mg/kg i.p. or per os protects for at least 2 h. The animals are protected from collapse for at least 1 h after 50 and 100 mg/kg, and 100 mg/kg afforded complete protection up to 2h. An oral dose of 100 mg/kg at 2 h, but not at 4 h before challenge also inhibits collapse. A dose of 100 mg/kg at 4 h and again at 2 h before challenge is more effective than a single dose at 2 h<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>			

## PROTOCOL

### Kinase Assay <sup>[1]</sup>

Inhibition by CI-949 of LTC<sub>4</sub>/D<sub>4</sub>, TXB<sub>2</sub>, and histamine release from human leukocytes challenged with anti-IgE. Cells are preincubated at 37°C with CI-949 (0.1, 1, 10 and 100 μM) for 10 minutes before the addition of anti-IgE. The cells are then challenged with appropriate stimulus in a concentration to obtain histamine release from the ascending portion of the

---

dose-response curve from each donor (or with buffer) and incubated for 50 minutes at 37°C. The reaction is stopped by centrifugation, and the resulting supernatant solutions are decanted and saved for quantitation of allergic mediators. Mediator release and inhibition of mediator release by CI-949 is comparable in cells prepared by either method<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**Animal Administration** <sup>[2]</sup>

Guinea pigs<sup>[2]</sup>  
Male, Hartley Strain guinea-pigs, weighing 175-250 g are used in these experiments. Actively sensitized guinea-pigs are given i.p. doses of 30, 50, or 100 mg/kg of CI-949 between 20-120 min before aerosol challenge with antigen<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

---

## REFERENCES

[1]. Conroy MC, et al. Inhibition of histamine, leukotriene C4/D4, and thromboxane B2 release from human leukocytes and human chopped lung mast cells by the allergic mediator release inhibitor, CI-949. *J Allergy Clin Immunol.* 1990 Dec;86(6 Pt 1):902-8.

[2]. Adolphson RL, et al. CI-949: a new, potential antiallergy compound inhibits antigen-induced allergic reactions in guinea-pigs in vitro and in vivo. *Pulm Pharmacol.* 1990;3(4):203-8.

---

**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