

# **Certificate of Analysis**

Print Date: Jan 15th 2016

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Product Name: JNJ 10191584 maleate Catalog No.: 2441 Batch No.: 1

CAS Number: 869497-75-6

IUPAC Name: 1-[(5-Chloro-1*H*-benzimidazol-2-yl)carbonyl]-4-methylpiperazine maleate

# 1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:  $C_{13}H_{15}CIN_4O.C_4H_4O_4$ 

Batch Molecular Weight: 394.81

Physical Appearance:Off-white solidSolubility:DMSO to 50 mMStorage:Desiccate at RT

**Batch Molecular Structure:** 

CI N N N Me

# 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.14$  (Dichloromethane:Methanol [95:5])

**HPLC:** Shows 100% purity

<sup>1</sup>H NMR: Consistent with structure Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 51.72 4.85 14.19 Found 51.45 4.78 14.13



# **Product Information**

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### **Description:**

Highly selective histamine  $H_4$  receptor silent antagonist; binds with high affinity to the human  $H_4$  receptor ( $K_i$  = 26 nM). > 540-fold selective over the  $H_3$  receptor ( $K_i$  = 14.1  $\mu$ M). Inhibits mast cell and eosinophil chemotaxis in vitro with  $IC_{50}$  values of 138 and 530 nM respectively. Orally active in vivo.

#### **Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>13</sub>H<sub>15</sub>ClN<sub>4</sub>O.C<sub>4</sub>H<sub>4</sub>O<sub>4</sub>

Batch Molecular Weight: 394.81 Physical Appearance: Off-white solid

**Minimum Purity: >99%** 

#### **Batch Molecular Structure:**

Storage: Desiccate at RT

# Solubility & Usage Info:

DMSO to 50 mM

#### Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

#### References:

**Terzioglu** *et al* (2004) Synthesis and structure-activity relationships of indole and benzimidazole piperazines as histamine H<sub>4</sub> receptor antagonists. Bioorg.Med.Chem.Lett. *14* 5251. PMID: 15454206.

**Venable** *et al* (2005) Preparation and biological evaluation of indole, benzimidazole, and thienopyrrole piperazine carboxamides: potent human histamine  $H_4$  antagonists. J.Med.Chem. **48** 8289. PMID: 16366610.

**Varga** *et al* (2005) Inhibitory effects of histamine H<sub>4</sub> receptor antagonists on experimental colitis in the rat. Eur.J.Pharmacol. *522* 130. PMID: 16213481.