

# Certificate of Analysis

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**Product Name:** CH 223191

**Catalog No.:** 3858

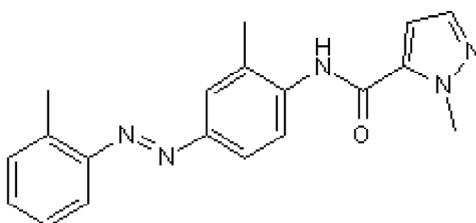
**Batch No.:** 3

**CAS Number:** 301326-22-7

**IUPAC Name:** 1-Methyl-*N*-[2-methyl-4-[2-(2-methylphenyl)diazenyl]phenyl]-1*H*-pyrazole-5-carboxamide

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>19</sub>N<sub>5</sub>O  
**Batch Molecular Weight:** 333.39  
**Physical Appearance:** Orange solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.6% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	68.45	5.74	21.01
Found	67.95	5.77	21.01

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**IUPAC Name:** 1-Methyl-N-[2-methyl-4-[2-(2-methylphenyl)diazenyl]phenyl]-1H-pyrazole-5-carboxamide

**Description:**

CH 223191 is a potent aryl hydrocarbon receptor (AhR) antagonist ( $IC_{50}$  = 30 nM). Exhibits no AhR agonist-like activity (at concentrations up to 100  $\mu$ M). Inhibits 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)-induced AhR-dependent transcription in vitro and reduces TCDD-induced toxicity in vivo. Attenuates Th17 differentiation of naive CD4 T cells and promotes expansion of hematopoietic stem cells in vitro.

**Physical and Chemical Properties:**

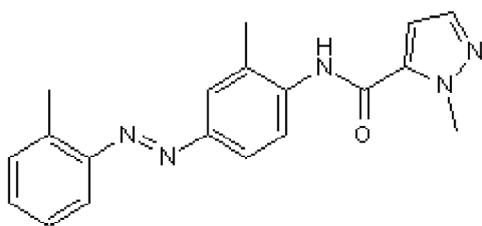
Batch Molecular Formula:  $C_{19}H_{19}N_5O$

Batch Molecular Weight: 333.39

Physical Appearance: Orange solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 100 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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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:**

**Dubrovskaja et al** (2012) CXCR4 activation maintains a stem cell population in tamoxifen-resistant breast cancer cells through AhR signalling. *Br.J.Cancer.* **107** 43. PMID: 22644306.

**Boitano et al** (2010) Aryl hydrocarbon receptor antagonists promote the expansion of human hematopoietic stem cells. *Science* **329** 1345. PMID: 20688981.

**Veldhoen et al** (2009) Natural agonists for aryl hydrocarbon receptor in culture medium are essential for optimal differentiation of TH17 T cells. *J.Exp.Med.* **206** 43. PMID: 19114668.

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