

## Certificate of Analysis

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**Product Name:** Gadolinium chloride

**Catalog No.:** 4741

**Batch No.:** 4

CAS Number: 10138-52-0

EC Number: 233-386-6

### 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	GdCl <sub>3</sub> .6H <sub>2</sub> O
<b>Batch Molecular Weight:</b>	371.7
<b>Physical Appearance:</b>	White solid
<b>Solubility:</b>	water to 100 mM
<b>Storage:</b>	Desiccate at RT
<b>Batch Molecular Structure:</b>	GdCl <sub>3</sub>

### 2. ANALYTICAL DATA

**Purity (based on rare earth analysis):** 99.999%

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

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Tel: +1 612 379 2956

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**Batch No.:** 4

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**Description:**

Calcium-sensing receptor (CaSR) agonist; induces NLRP3 inflammasome activation in bone marrow-derived macrophages. Blocks stretch-activated calcium channels; inhibits increase in intracellular calcium ion concentration in hypotonic-stimulated pulmonary artery smooth muscle cells. Has been demonstrated to block TRPML channel currents and other TRP channels.

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Batch Molecular Weight: 371.7

Physical Appearance: White solid

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water 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. 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:**

**Del Favero *et al*** (2012) The stretch-activated channel blocker Gd<sup>3+</sup> reduces palytoxin toxicity in primary cultures of skeletal muscle cells. *Chem.Res.Toxicol.* **25** 1912. PMID: 22900474.

**Lee *et al*** (2012) The calcium-sensing receptor regulates the NLRP3 inflammasome through Ca<sup>2+</sup> and cAMP. *Nature* **492** 123. PMID: 23143333.

**Nishitani *et al*** (2011) Calcium signaling in live cells on elastic gels under mechanical vibration at subcellular levels. *PLoS One.* **6** e26181. PMID: 22053183.

**Nagata *et al*** (2008) The varitint-waddler (Va) deafness mutation in TRPML3 generates constitutive, inward rectifying currents and causes cell degeneration. *Proc.Natl.Acad.Sci.U.S.A.* **105** 353. PMID: 18162548.

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