

Product Name: Gadolinium chloride
CAS Number: 10138-52-0

Catalog No.: 4741 **Batch No.:** 1
EC Number: 233-386-6

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $GdCl_3 \cdot 6H_2O$
Batch Molecular Weight: 371.7
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure: $GdCl_3$

2. ANALYTICAL DATA

Purity (based on rare earth analysis): 99.999%
Lithium (Li): 0.3 ppm
Yttrium (Y): 0.4 ppm
Titanium (Ti): 3.1 ppm
Dysprosium (Dy): 0.3 ppm
Vanadium (V): 1.4 ppm
Lead (Pb): 5.3 ppm
Praseodymium (Pr): 6.1 ppm
Erbium (Er): 0.8 ppm
Ytterbium (Yb): 0.9 ppm
Europium (Eu): 1.2 ppm
Lutetium (Lu): 2.4 ppm

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

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Catalog No.: 4741

Batch No.: 1

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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.

Physical and Chemical Properties:

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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:

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.

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

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

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

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