

# Gardiquimod™

Imidazoquinoline compound; TLR7 ligand

Catalog codes: tlr1-gdqs-1, tlr1-gdq-10

<https://www.invivogen.com/gardiquimod>

For research use only

Version 23L14-MM

## PRODUCT INFORMATION

### Contents

- Gardiquimod™ is available in two quantities:
  - 2 x 500 µg Gardiquimod™: tlr1-gdqs-1
  - 2 x 5 mg Gardiquimod™: tlr1-gdq-10
- Sterile endotoxin-free water; 1.5 ml with #tlr1-gdqs-1 and 10 ml with #tlr1-gdq-10.

### Storage and stability

- Gardiquimod™ is provided lyophilized and shipped at room temperature. Upon receipt, store at -20°C.
- Upon resuspension, prepare aliquots of Gardiquimod™ and store at -20°C for long term storage. Resuspended product is stable for 6 months at -20°C. Avoid repeated freeze-thaw cycles.

### Quality control

- Purity: ≥95% (UHPLC)
- TLR7 activity has been confirmed using HEK-Blue™ TLR7 cells.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

## DESCRIPTION

Gardiquimod™ is an imidazoquinoline compound developed and manufactured by InvivoGen. Similarly to its imidazoquinoline analog Imiquimod (R837), Gardiquimod™ induces the activation of NF-κB in HEK293 cells expressing human or murine TLR7.

Interestingly, Gardiquimod™ is more potent than Imiquimod. Gardiquimod™ is able to induce NF-κB activation in HEK-Blue™ TLR7 cells at a concentration of 0.1 µg/ml whereas Imiquimod requires a concentration of 1 µg/ml to induce NF-κB activation in these cells.

Gardiquimod™ is specific for TLR7 when used at concentrations lower than 1 µg/ml. At higher concentrations (≥3 µg/ml), Gardiquimod™ also activates TLR8.

## CHEMICAL PROPERTIES

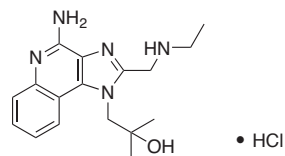
CAS number: 1020412-43-4 (free base)

Formula: C<sub>17</sub>H<sub>23</sub>N<sub>5</sub>O • HCl

Molecular weight: 349.9 g/mol

Solubility: 1 mg/ml in water

Structure:



## METHODS

### Preparation of a stock solution (1 mg/ml)

Stimulation of TLR7 can be achieved with 0.1-3 µg/ml Gardiquimod™.

- Add 500 µl endotoxin-free water to 500 µg of Gardiquimod™ and vortex until completely dissolved.
- Add 5 ml endotoxin-free water to 5 mg of Gardiquimod™ and vortex until completely dissolved.

### TLR7 stimulation with Gardiquimod™

Gardiquimod™ can be used to stimulate TLR7 in HEK-Blue™ TLR7 cells. These cells stably express an NF-κB-inducible secreted embryonic alkaline phosphatase (SEAP) and overexpress the human or murine TLR7 gene. For more information please visit: <https://www.invivogen.com/hek-blue-tlr7>.

- Stimulate HEK-Blue™ TLR7 with 0.1-3 µg/ml Gardiquimod™.
- Incubate for 6-24 h at 37°C, 5% CO<sub>2</sub>.
- Determine TLR stimulation using a SEAP detection medium, such as QUANTI-Blue™ Solution or HEK-Blue™ Detection or by assessing cytokine expression using an ELISA.

## RELATED PRODUCTS

Product	Description	Cat. Code
R848 (Resiquimod)	TLR7/TLR8 ligand	tlr1-r848-1
HEK-Blue™ hTLR7 cells	Human TLR7 reporter cells	hkb-htlr7
HEK-Blue™ mTLR7 cells	Murine TLR7 reporter cells	hkb-mtlr7
HEK-Blue™ Detection	SEAP detection medium	hb-det2
QUANTI-Blue™ Solution	SEAP detection reagent	rep-qbs

## TECHNICAL SUPPORT

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