

Gardiquimod™

Imidazoquinoline compound; TLR7 ligand

Catalog codes: tlr1-gdqs, tlr1-gdq-5

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

For research use only

Version 20A02-MM

PRODUCT INFORMATION

Contents

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

Storage and stability

- Gardiquimod™ is provided lyophilized and shipped at room temperature. Store at -20°C. Lyophilized product is stable for 1 year at -20°C when properly stored.
- 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 have been tested 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

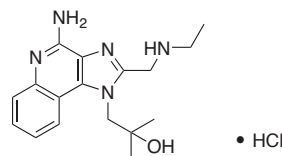
CAS number: 1020412-43-4 (free base)

Formula: C₁₇H₂₃N₅O • HCl

Molecular weight: 349.9

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 (provided) to 500 µg of Gardiquimod™ and vortex until completely dissolved.
- Add 5 ml endotoxin-free water (provided) 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-trl7>.

1. Stimulate HEK-Blue™ TLR7 with 0.1-3 µg/ml Gardiquimod™.
2. Incubate for 6-24 h at 37°C, 5% CO₂.
3. 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
CL264	TLR7 ligand	tlr1-c264s
Imiquimod	TLR7 ligand	tlr1-imqs
HEK-Blue™ hTLR7 cells	Human TLR7 reporter cells	hkb-htrlr7
HEK-Blue™ mTLR7 cells	Murine TLR7 reporter cells	hkb-mtrlr7
HEK-Blue™ Detection	SEAP detection medium	hb-det2
QUANTI-Blue™ Solution	SEAP detection reagent	rep-qbs

TECHNICAL SUPPORT

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