

Gardiquimod™ VacciGrade™

Imidazoquinoline compound; TLR7-based adjuvant

Catalog # vac-gdq

For research use only. Not for use in humans.

Version # 16I26-MM

PRODUCT INFORMATION

Content:

- 5 mg of lyophilized Gardiquimod™ VacciGrade™
- 10 ml sterile endotoxin-free physiological water (NaCl 0.9%)

Storage and stability

- Gardiquimod™ VacciGrade™ is shipped at room temperature and should be stored at -20°C. Lyophilized product is stable for 1 year when properly stored.
- Upon resuspension, prepare aliquots of Gardiquimod™ VacciGrade™ and store at -20°C. Resuspended product is stable for 6 months when properly stored. Avoid repeated freeze-thaw cycles.

Quality control

Gardiquimod™ VacciGrade™ is a preclinical grade preparation of Gardiquimod™. It is prepared under strict aseptic conditions and is tested for the presence of endotoxins. Gardiquimod™ VacciGrade™ is guaranteed sterile and its endotoxin level is <5 EU/mg.

CHEMICAL PROPERTIES

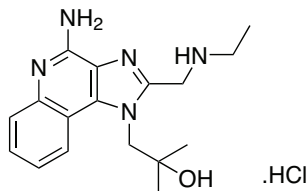
CAS number: 1020412-43-4

Formula: C₁₇H₂₃N₅O • HCl

Molecular weight: 349.9

Solubility: 1 mg/ml in physiological water

Structure:



METHODS

Preparation of sterile stock solution (1 mg/ml)

- Add 5 ml endotoxin-free physiological water to 5 mg of Gardiquimod™ VacciGrade™ to obtain a solution at 1 mg/ml.
- Mix the solution by pipetting up and down.

Working Concentration: 10-100 µg/mouse

DESCRIPTION

Gardiquimod™ is an imidazoquinoline compound developed and manufactured by InvivoGen. Gardiquimod™ is a Toll-like receptor (TLR)-7 agonist and, like other TLR7 agonists, such as Imiquimod (R837), is an immune response modifier with potent anti-tumor activity¹. Gardiquimod™ has been shown to activate antigen-presenting cells, including dendritic cells (DC) and promote activation of T and natural killer (NK) cells making it a good vaccine adjuvant candidate^{1,2}.

A recent study suggests that Gardiquimod™ may serve as a vaccine adjuvant to potentiate the efficiency of DC-based tumor immunotherapy¹. In another study, a tuberculosis vaccine formulated with Gardiquimod™ was found to protect mice against *Mycobacterium tuberculosis* when administered intradermally³. Furthermore, Velasquez *et al.* have reported the potential use of Gardiquimod™ as a mucosal adjuvant for virus-like particles-based vaccines⁴.

1. Ma F. *et al.*, 2010. The TLR7 agonists imiquimod and gardiquimod improve DC-based immunotherapy for melanoma in mice. *Cell Mol Immunol.* 7(5):381-8. 2. Ma Y. *et al.*, 2010. Assessing the immunopotency of Toll-like receptor agonists in an in vitro tissue-engineered immunological model. *Immunology.* 130(3):374-87. 3. Baldwin SL *et al.*, 2009. Intradermal immunization improves protective efficacy of a novel TB vaccine candidate. *Vaccine.* 27(23):3063-71. 4. Velasquez LS. *et al.*, 2010. An intranasally delivered Toll-like receptor 7 agonist elicits robust systemic and mucosal responses to Norwalk virus-like particles. *Clin Vaccine Immunol.* 17(12):1850-8.

TECHNICAL SUPPORT

InvivoGen USA (Toll-Free): 888-457-5873

InvivoGen USA (International): +1 (858) 457-5873

InvivoGen Europe: +33 (0) 5-62-71-69-39

InvivoGen Hong Kong: +852 3-622-34-80

E-mail: info@invivogen.com

RELATED PRODUCTS

Product	Description	Catalog Code
Adjuvants		
AddaVax™	Squalene-Oil-in-water	vac-adx-10
Alhydrogel® adjuvant 2%	Aluminium hydroxide gel	vac-alu-250
IFA	Incomplete Freund's adjuvant	vac-ifa-10
Poly(I:C) VacciGrade™	TLR3 agonist	vac-pic
MPLAs VacciGrade™	TLR4 agonist	vac-mpls
Flagellin FliC VacciGrade™	TLR5 agonist	vac-fla
Imiquimod VacciGrade™	TLR7 agonist	vac-imq
R848 VacciGrade™	TLR7/8 agonist	vac-r848
ODN 1826 VacciGrade™	murine TLR9 agonist	vac-1826-1
ODN 2006 VacciGrade™	human TLR9 agonist	vac-2006-1
N-glycolyl-MDP VacciGrade™	NOD2 agonist	vac-gmdp
OVA Antigens		
EndoFit™ Ovalbumin (Endotoxin-free)	For <i>in vivo</i> use; endotoxin level <1EU/mg	vac-pova
Ovalbumin	For detection; Western, ELISA	vac-stova
Ova 257-264	For detection; ELISPOT	vac-sin
Ova 323-339	For detection; ELISPOT	vac-isq

TECHNICAL SUPPORT

InvivoGen USA (Toll-Free): 888-457-5873
 InvivoGen USA (International): +1 (858) 457-5873
 InvivoGen Europe: +33 (0) 5-62-71-69-39
 InvivoGen Hong Kong: +852 3-622-34-80
 E-mail: info@invivogen.com