

Flagellin FliC VacciGrade™

Recombinant flagellin from *S. typhimurium*; TLR5 ligand

Catalog # vac-fla

<http://www.invivogen.com/flagellin-vaccigrade>

For research use only. Not for use in humans.

Version # 17L04-MM

PRODUCT INFORMATION

Content:

- 50 µg of lyophilized Flagellin FliC VacciGrade™
- 10 ml sterile endotoxin-free physiological water (NaCl 0.9%)

Storage and stability

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

QUALITY CONTROL

Flagellin FliC is VacciGrade™ (preclinical grade). It is prepared under strict aseptic conditions and is tested for the presence of endotoxins. Flagellin FliC VacciGrade™ is guaranteed sterile and its endotoxin level is <0.005 EU/µg (measurement by kinetic chromogenic LAL assay).

DESCRIPTION

Flagellin FliC is a recombinant flagellin protein encoded by the *fliC* gene from *Salmonella typhimurium*. Bacterial flagellin, a TLR5 ligand, is a potent T-cell antigen and has potential as a vaccine adjuvant. Unlike other TLR agonists, flagellin tends to produce mixed Th1 and Th2 responses rather than strongly Th1 responses¹. It has been demonstrated that flagellin can act as a potent adjuvant in flu vaccines^{2,3}. Furthermore, flagellin can also signal through the NLR4 inflammasome⁴, although it is not known whether this pathway contributes to the adjuvant activity of flagellin. Flagellin from *Salmonella typhimurium* has been tested in animal models⁵⁻⁶. Experimental results in mice demonstrated that an intraperitoneal injection of flagellin can induce cytokine production and boost intestinal innate immune defense⁶.

1. Huleatt J. *et al.*, 2007. Vaccination with recombinant fusion proteins incorporating Toll-like receptor ligands induces rapid cellular and humoral immunity. *Vaccine* 25(4): 763-75. 2. Mbow ML. *et al.*, 2010. New adjuvants for human vaccines. *Curr Opin Immunol.* 22(3):411-6. 3. Skountzou I. *et al.*, 2010. Salmonella flagellins are potent adjuvants for intranasally administered whole inactivated influenza vaccine. *Vaccine* 28(4): 4103-12. 4. Miao EA. & Warren SE., 2010. Innate immune detection of bacterial virulence factors via the NLR4 inflammasome. *J Clin Immunol.* 30(4): 502-6. 5. Taillardet M. *et al.*, 2010. Toll-like receptor agonists allow generation of long-lasting antipneumococcal humoral immunity in response to a plain polysaccharidic vaccine. *J Infect Dis.* 202(3):470-9. 6. Kinnebrew MA. *et al.*, 2010. Bacterial flagellin stimulates Toll-like receptor 5-dependent defense against vancomycin-resistant *Enterococcus* infection. *J Infect Dis* 201(4): 534-43.

METHODS

Preparation of stock solution (500 µg/ml)

- Open vial lid carefully to avoid any loss of product.
- Add 100 µl of the sterile endotoxin-free physiological water to the 50 µg vial.
- Mix by pipetting. Do not vortex.

Working Concentration: 1-10 µg/mouse

RELATED PRODUCTS

Product	Description	Cat. Code
Adjuvants		
AddaVax™	Squalene-Oil-in-water	vac-adx-10
Alhydrogel adjuvant 2%	Al(OH) gel	vac-alu-250
IFA	Incomplete Freund's adjuvant	vac-ifa-10
Poly(I:C) VacciGrade™	TLR3 agonist	vac-pic
MPLA-SM VacciGrade™	TLR4 agonist	vac-mpla
Gardiquimod VacciGrade™	TLR7 agonist	vac-gdq
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	For <i>in vivo</i> use	vac-pova
Ovalbumin	For detection	vac-stova
Ova 257-264	For detection	vac-sin
Ova 323-339	For detection	vac-isq

TECHNICAL SUPPORT

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