## CELL CULTURE

## **VACCINE ADJUVANTS**



## Shape the adaptive immune response

- → VacciGrade<sup>™</sup> guarantees purity and sterility
- ----- Largest choice of vaccine adjuvants
- ---- Create your own adjuvant mix

Intensive research focuses on optimizing the use of vaccine adjuvants to not only enhance, but orientate specific Th1 or Th2 adaptive immune responses to antigens. InvivoGen provides a thoroughly tested and extensive range of adjuvants, in a guaranteed sterile VacciGrade<sup>™</sup>, for preclincal studies. InvivoGen's collection includes the approved alum and oil emulsions and promising pattern recognition receptor (PRR) ligands. Boost your adjuvant research today by choosing from the number one adjuvant collection.



# Choose from our extensive collection:

#### Alum and emulsions:

Alhydrogel®, AddaVax™, IFA and more.

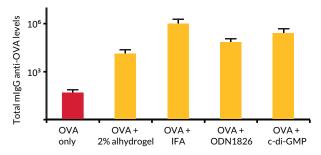
#### PRR ligands:

MPLA, Poly(I:C), c-di-GMP, CpG ODNs and more.

www.invivogen.com/vaccine-adjuvants

### Vaccine Adjuvants

InvivoGen provides the largest choice of preclinical grade vaccine adjuvants (for research use only), that are either already approved for use in human vaccination or are still under investigation. These include particulate adjuvants, such as alum and emulsions, as well as molecules known to activate pattern recognition receptors (PRR) such as CpG ODNs, MPLA, Poly(I:C), and cyclic dinucleotides. InvivoGen's adjuvants are prepared under strict aseptic conditions and are therefore guaranteed sterile. Additionally, they are thoroughly tested for the presence of endotoxins and to ensure lot-to-lot reproducibility.



OVA specific antibodies in serum of immunized mice were evaluated 30 days post subcutaneous injection with the OVA antigen alone or in combination with different adjuvants from InvivoGen.

| PRODUCT                               | DESCRIPTION   | QUANTITY               | CAT.CODE                 |
|---------------------------------------|---|------------------------|--------------------------|
| Alum and Emulsions                    |   |                        |                          |
| AddaVax™                              | Squalene-Oil-in-water - Th1/Th2 response                      | 10 ml                  | vac-adx-10               |
| Adju-Phos® adjuvant                   | Aluminium phosphate gel - Th2 Response                        | 250 ml                 | vac-phos-250             |
| Alhydrogel® adjuvant 2%               | Aluminium hydroxide gel (Alum) - Th2 Response                 | 250 ml                 | vac-alu-250              |
| CFA                                   | Complete Freund's Adjuvant - Th1 response                     | 10 ml<br>6 x 10 ml     | vac-cfa-10<br>vac-cfa-60 |
| IFA                                   | Incomplete Freund's adjuvant - Th2 response                   | 10 ml<br>6 x 10 ml     | vac-ifa-10<br>vac-ifa-60 |
| Quil-A® adjuvant                      | Purified triterpenoid saponin                                 | 1 g                    | vac-quil                 |
| PRR ligands                           |   |                        | ·                        |
| 2'3'-c-di-AM(PS)2 (Rp,Rp) VacciGrade™ | 2'3' bisphosphorothioate analog of c-di-AMP - STING agonist   | 500 µg                 | vac-nacda2r              |
| 2'3'-cGAMP VacciGrade™                | Cyclic [G(2',5')pA(3',5')p] - STING agonist                   | 1 mg                   | vac-nacga23              |
| c-di-AMP VacciGrade™                  | Cyclic diadenylate monophosphate - STING agonist              | 1 mg                   | vac-nacda                |
| c-di-GMP VacciGrade™                  | Cyclic diguanylate monophosphate - STING agonist              | 1 mg                   | vac-nacdg                |
| CL401 VacciGrade™                     | Chimeric molecule - TLR2 & TLR7 agonist                       | 5 mg                   | vac-c401-5               |
| CL413 VacciGrade™                     | Chimeric molecule - TLR2 & TLR7 agonist                       | 5 mg                   | vac-c413-5               |
| CL429 VacciGrade™                     | Chimeric molecule - TLR2 & NOD2 agonist                       | 5 mg                   | vac-c429                 |
| Flagellin FliC VacciGrade™            | Recombinant flagellin from S. typhimurium - TLR5 agonist      | 50 µg                  | vac-fla                  |
| Imiquimod VacciGrade™                 | Imidazoquinoline compound -TLR7 agonist                       | 5 mg                   | vac-imq                  |
| LPS-EB VacciGrade™                    | Lipopolysaccharide from E. coli 0111:B4 strain - TLR4 agonist | 5 x 10 <sup>6</sup> EU | vac-3pelps               |
| MPLA-SM VacciGrade™                   | Monophosphoryl lipid A from S. minnesota R595 - TLR4 agonist  | 1 mg                   | vac-mpla                 |
| MPLAs Vaccigrade™                     | Synthetic monophosphoryl lipid A - TLR4 agonist               | 1 mg                   | vac-mpls                 |
| ODN 1585 VacciGrade™                  | CpG ODN, Class A (murine) - TLR9 agonist                      | 1 mg                   | vac-1585-1               |
| ODN 1826 VacciGrade™                  | CpG ODN, Class B (murine) - TLR9 agonist                      | 1 mg                   | vac-1826-1               |
| ODN 2006 VacciGrade™                  | CpG ODN, Class B (human) - TLR9 agonist                       | 1 mg                   | vac-2006-1               |
| ODN 2395 VacciGrade™                  | CpG ODN, Class C (human/murine) - TLR9 agonist                | 1 mg                   | vac-2395-1               |
| Pam3CSK4 VacciGrade™                  | Synthetic triacylated lipoprotein - TLR1/2 agonist            | 1 mg                   | vac-pms                  |
| Poly(I:C) (HMW) VacciGrade™           | Polyinosine-polycytidylic acid -TLR3 agonist                  | 10 mg                  | vac-pic                  |
| R848 VacciGrade™                      | Imidazoquinoline compound -TLR7/8 agonist                     | 5 mg                   | vac-r848                 |
| TDB VacciGrade™                       | Synthetic analog of the cord factor - Mincle agonist          | 2 mg                   | vac-tdb                  |

## InvivoGen

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