

For effective activation of pDCs and B cells A high-quality, low-cost TLR9 agonist!

- Strong and specific immune stimulation of humans, mouse immune cells, and laboratory animals
- High purity, endotoxin-free and sterile vials
- Simple handling
- Low price offering realized by large scale production

It's important to choose the right agonist for individual purpose.

Different classes of TLR9 agonists have been shown to have different effects on cells.



A-Class TLR9 ligand

D35

- Induces high type I IFN production
- Low activity against B cells
- Useful for activation of pDCs, induction of IFN- α from PBMCs, and activation of IFN-signal pathways

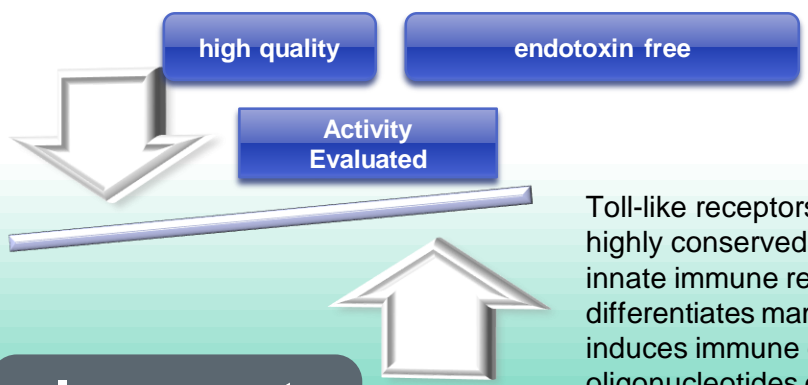
B-Class TLR9 ligand

K3

- Stimulates B cells to activate TLR9-dependent NF-kB signaling
- Low activity with respect to induction of IFN- α
- B-Class is useful for B cell activation, induction of IL -6 from human PBMCs, and activation of the NF-kB signal pathway



*The picture is the product image.

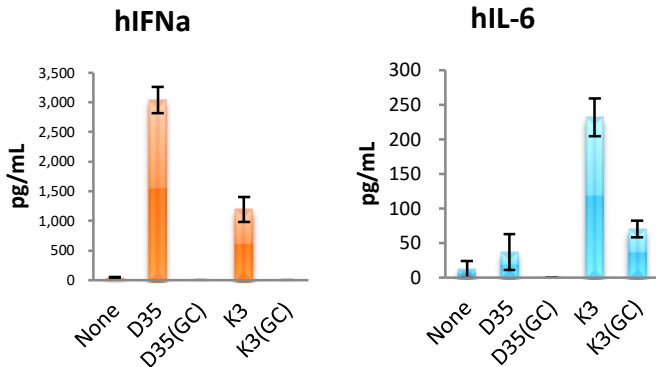


Toll-like receptors (Toll-like receptors: TLRs) recognize highly conserved structural motifs as part of the early innate immune response to invading pathogens. TLR9 differentiates mammalian and bacterial DNA and induces immune cell activation. Synthetic oligonucleotides containing CpG motifs (CpG-ODN) stimulate the immune system, promote the maturation and activation of antigen-presenting cells, and promote the induction of Th1 and inflammatory cytokines.

Aji Bio-Pharma provides high-quality TLR9 agonists and controls to activate immune cells.

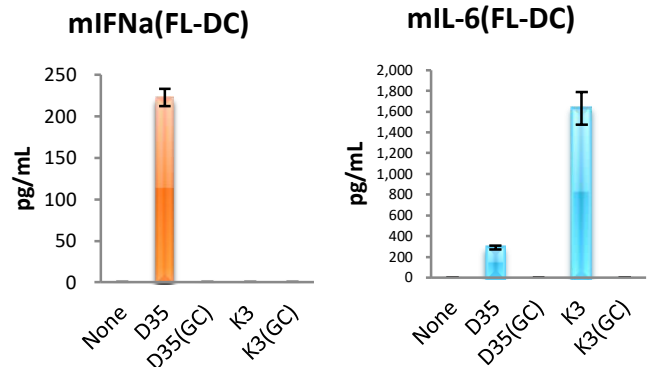
Activity Evaluation

Example 1 Cytokine Induction in Human PBMC



Human PBMC (1×10^6 cells) were assayed by ELISA for human IFN- α and IL-6 concentrations in culture supernatants 24 h after stimulation with 1 μ M of each CpG. Bar graphs show mean \pm SEM.

Example 2 Cytokine induction in mouse FL-DC



FL-DC from mouse bone marrow induced by FLT3L differentiation (2×10^6 cells) was assayed by ELISA in mouse IFN- α and IL-6 concentrations in culture supernatants 24 h after stimulation with 1 μ M of each CpG. Bar graphs show mean \pm SEM.

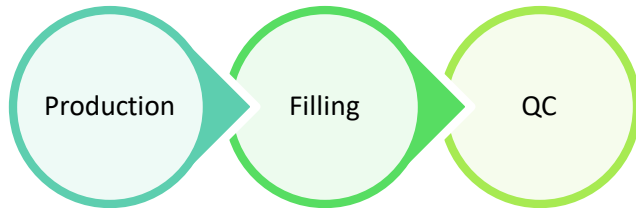
This data is the result of a joint research project with Dr. Ken Ishii and Dr. Taiki Aoshi of the National Institute of Biomedical Innovation, Japan.

Reference

- Ishii KJ, Gursel I, Gursel M, Klinman DM. Immunotherapeutic utility of constitutive and suppressive oligodeoxynucleotides. *Curr Opin Mol Ther.* 2004 Apr; 6 (2): 166 -74.
- Verthelyi D, Ishii KJ, Gursel M, Takeda F, Klinman DM. Human peripheral blood cells differentially recognize and respond to two distinct CPG motifs. *J Immunol.* 2001 Feb 15; 2372 (4): 166 -7.

High quality with tightly controlled production and management ensured

- Filling in a pyrogen free, sterile environment



- Cost reduction through mass production
- Highly reproducible production

- Various product certification
- Ensure endotoxin no more than 0.5 EU/mg

In vitro and in vivo
Best for experimentation

Catalog Number	Class	Product Name	Product Description	amount of supply	Price (excluding tax)
CN -65001	A	D 35 Et-Free	partial S-DNA	10 mg/vial × 1	40,000
CN -65002		D 35 (GC) Et-Free	partial S-DNA	10 mg/vial × 1	40,000
CN -65003	B	K3 Et-Free	whole S-DNA	10 mg/vial × 1	40,000
CN -65004		K3 (GC) Et-Free	for K3 control	10 mg/vial × 1	40,000

***Et-Free: An abbreviation for endotoxin free (Guaranteed up to 0.5 EU/mg)**

This product is a research reagent. It cannot be used for clinical purposes.

For life science research use only. Not for use in clinical procedures.

[manufacturing and distribution company]



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