

## TLR8 and TLR7 Ligand: Imidazoquinoline Resiquimod (R-848)

**Cat. No.:** IMG-2208

**Content:** 500 µg in 500 µl of sterile water

**Concentration:** 1 mg/ml

**Purity:** ≥98% (HPLC)

### Storage and Stability

Shipped at 4°C. Upon receipt, aliquot and store at -20°C. Product is stable in its undiluted form for 6 months at -20°C. Prepare dilutions by adding the appropriate amount of sterile water or tissue culture media.

### Usage

Activation of mouse TLR7 and human TLR7 and TLR8.

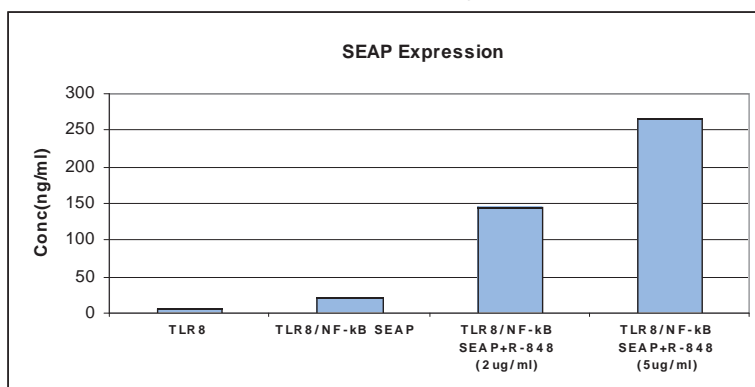
### Amount per assay

Stimulation of TLR8 has been achieved with 0.5-5 µg/ml.

### Description

Imidazoquinoline resiquimod (R-848) is a low molecular weight synthetic molecule of the Imidazoquinoline family. It has potent immunostimulatory activity. It stimulates antibody secretion, cytokine production, protection from apoptosis and CD80 up-regulation. R-848 has been shown to activate only TLR7 and TLR8. This activation is MyD88 dependent and leads to the induction of the transcription factor NF-κB.

### TLR8 stimulation with R-848 measured by SEAP Expression



293T cells were transfected with pCMV/TLR8 plasmid and pNF-κB/SEAP plasmid using Lipofectamin 2000 (Life Technology). After 48 hrs of transfection, 2 µg/ml or 5 µg/ml of R-848 (IMGENEX, IMG-2208) was added. Cells were incubated at 37°C for 24 hrs. Transfected cell supernatant was collected and analyzed using NF-κB SEAPorter™ Assay kit (IMGENEX, IMK-515K).

### References

1. M Jurk. et al. Human TLR7 or TLR8 independently confer responsiveness to the antiviral compound R-848. *Nature Immunology*. 3, 499 (2002).
2. J.J.Wu. et al. Resiquimod: a new immune response modifier with potential as a vaccine adjuvant for Th1 immunoresponses. *Antiviral Res.* 64, 79 (2004).
3. G. Caron. et al. Direct stimulation of human T cells via TLR5 and TLR7/8: flagellin and R-848 upregulate proliferation and IFN-gamma production by memory CD4+ T cells: *J Immunology*. 175,1551 (2005).

*Research purposes only. Not for diagnostic or in vivo use. This product is guaranteed to perform as indicated on the datasheet for one year from the date of purchase.*