

HKLR

Heat Killed *Lactobacillus rhamnosus* - TLR2 ligand

Catalog # tlr1-hklr

For research use only

Version # 11C01-MM

PRODUCT INFORMATION

Content:

- 10¹⁰ freeze-dried cells of Heat Killed *Lactobacillus rhamnosus* (HKLR)
- 1.5 ml sterile endotoxin-free water

Storage :

- HKLR is provided lyophilized and shipped at room temperature. Store at 4°C.
- Upon resuspension, prepare aliquots of HKLR and store at 4°C for short term storage or -20°C for long storage.
- Product is stable 1 month at 4°C and 6 months at -20°C when properly stored.

DESCRIPTION

Lactobacillus rhamnosus is a nonpathogenic gram-positive inhabitant of the human microflora. It is used as a natural preservative in yogurt and other dairy products to extend the shelf life. *Lactobacillus rhamnosus* is known to have beneficial health effects, such as the nonspecific enhancement of the immune system. Indeed, heat-killed *Lactobacillus rhamnosus* (HKLR) has been shown to be a potent inducer of TNF- α from mouse mononuclear cells. This immune response is dependent on TLR2 and CD14¹.

1. Matsuguchi T. *et al.*, 2003. Lipoteichoic Acids from *Lactobacillus* Strains Elicit Strong Tumor Necrosis Factor Alpha-Inducing Activities in Macrophages through Toll-Like Receptor 2. *Clin. Diagn. Lab. Immunol.*, 10: 259 - 266.

METHODS

Preparation of stock solution (10¹⁰ HKLR/ml)

Stimulation of TLR2 can be achieved with 10⁸ - 10⁹HKLR/ml.

- Add 1 ml sterile endotoxin-free water (provided) to rehydrate the pellet.

- Vortex 10 sec or until homogenized.

Note: Resuspended HKLR results in a milky solution.

HKLR stimulation

- Transfect your cell line with an NF- κ B reporter plasmid, i.e. a plasmid carrying a reporter gene, such as SEAP or luciferase, under the control of an NF- κ B-inducible ELAM-1 (E-selectin) promoter³.

Note: InvivoGen provides pNiFty, a family of NF- κ B-inducible reporter plasmids that can be transfected transiently (pNiFty) or stably (pNiFty2). pNiFty plasmids are available either with the SEAP or luciferase reporter genes (see Related Products). If your cell line does not naturally express TLR2, cotransfect with a TLR2 expressing plasmid, such as pUNO-TLR2.

Note: Alternatively, evaluate TLR2 activation using reporter cells, such as InvivoGen's HEK-Blue™ hTLR2 cells which express the human TLR2 and SEAP reporter genes. NF- κ B production in these cells can be easily quantified using a SEAP detection medium, such as QUANTI-Blue™ or HEK-Blue™ Detection.

- Twenty-four to forty-eight hours after transfection, stimulate cells with 10⁸ - 10⁹ HKLR/ml for 6 to 24 hours.

- Determine HKLR stimulation on TLR2 by assessing reporter gene expression using the appropriate detection system.

RELATED PRODUCTS

Product	Catalog Code
HEK-Blue™ hTLR2 cells	hkb-htlr2
pNiFty-Luc (Amp ^R)	pnifty-luc
pNiFty-SEAP (Amp ^R)	pnifty-seap
pNiFty2-Luc (Zeo ^R)	pnifty2-luc
pNiFty2-SEAP (Zeo ^R)	pnifty2-seap
pUNO1-hTLR2 (human gene)	puno1-htlr2
pUNO-mTLR2 (mouse gene)	puno-mtlr2

TECHNICAL SUPPORT

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