

Product Information

Contents: Phycoerythrin (PE) anti-human Toll-like receptor 9 (TLR9, TLR-9)

Catalog Number: 12-9099

Sizes: 25 µg, 100 µg

Formulation: Phosphate buffer pH 7.2,
150 mM NaCl, 0.09% NaN₃

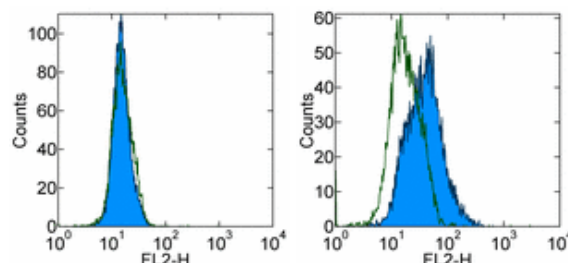
Storage Conditions: Store at 4°C.

DO NOT FREEZE.

LIGHT-SENSITIVE MATERIAL.

Clone: eB72-1665

Isotype: Rat IgG2a, κ



Staining of non-transfected (left) and human TLR9 transfected (right) HEK293 cells with 1.0 µg of PE Rat IgG2a Iso Cntrl (cat. 12-4321) (open histogram) or 1.0 µg of PE eB72-1665 (colored histogram). Total viable cells were used for analysis.

Available Formats of This Product

Cat. No.	Format	Excite (nm)	Emit (nm)	Reported Applications
12-9099	PE anti-human Toll-like receptor 9 (TLR9, TLR-9)	488	575	IC
14-9099	Affinity Purified anti-human Toll-like receptor 9 (TLR9, TLR-9)	N/A	N/A	IC IP WB
19-9099	DISCONTINUED - Cy5 anti-human Toll-like receptor 9 (TLR9, TLR-9)	633	670	IC

Description

eB72-1665 is generated against a portion of human toll-like receptor 9 (aa 273-288), a molecule reported to be expressed predominantly intracellularly. TLR9 is a ~115-120 kDa molecule, which mediates response to unmethylated CpG dinucleotides in bacterial DNA. CpG DNA induces a strong T-helper-1-like inflammatory response and the proliferation of TLR9-positive human B cells. When stimulated with CpG DNA, TLR9-deficient (TLR9^{-/-}) mice lacked splenocyte proliferation, inflammatory cytokine production from macrophages, and dendritic cell maturation, as compared with normal mice. To date, at least twelve members of the Toll family have been identified. This family of type I transmembrane proteins is characterized by an extracellular domain with leucine-rich repeats and a cytoplasmic domain with homology to the type I IL-1 receptor. Members of the TLR family are involved in recognition and response to different microbial components including lipoproteins, peptidoglycans, and nucleic acids and play important roles in innate immunity and inflammation. TLR9 is not detected by flow cytometry using this antibody on lysed whole human blood and/or isolated human PBMC stained for cell surface or intracellular TLR9. This may be due to limitations of antigen detection by flow cytometry. Human pDCs matured in the presence of IL-3 have been reported to stain with eB72-1665 by immunofluorescence microscopy (Nat Immunol. 5:190). Human Epithelial Cell lines were also reported to stain with this mAb (J. Immunol. 173: 1219). Further studies are needed to determine the relationship between mRNA expression and protein detection by flow cytometry.

Usage

For research use only, not for diagnostic or therapeutic use. This eB72-1665 antibody has been reported for use in intracellular flow cytometric analysis.

Applications Tested

This eB72-1665 antibody has been tested by intracellular flow cytometric analysis of hTLR9 transfected cells. This can be used at less than or equal to 1 µg per million cells in a 100 µl total staining volume. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Related Products

Cat. 12-4321 PE Rat IgG2a Isotype Control
Cat. 00-8222 eBioscience IC Fixation Buffer
Cat. 00-8333 eBioscience Permeabilization Buffer(10X)

Cat. 88-8823 eBioscience Fixation & Permeabilization
Cat. 14-9099 Affinity Purified anti-human Toll-like receptor 9 (TLR9, TLR-9) (clone eB72-1665)
Cat. 19-9099 Cy5 anti-human Toll-like receptor 9 (TLR9, TLR-9) (clone eB72-1665)
Cat. 66-P929 Toll-like receptor 9 (TLR9, TLR-9) blocking peptide (for 14-9929-92)

References

Latz E, Schoenemeyer A, Visintin A, Fitzgerald KA, Monks BG, Knetter CF, Lien E, Nilsen NJ, Espevik T, Golenbock DT. 2004. TLR9 signals after translocating from the ER to CpG DNA in the lysosome. *Nat Immunol.* 5(2):190-8.

Juliane Platz, Christoph Beisswenger, Alexander Dalpke, Rembert Koczulla, Olaf Pinkenburg, Claus Vogelmeier, and Robert Bals. 2004. Microbial DNA Induces a Host Defense Reaction of Human Respiratory Epithelial Cells. *J. Immunol.* 173: 1219 - 1223.

Leifer, CA, Kennedy, MN, Mazzoni, A, Lee, CW, Kruhlak, MJ, Segal, DM. 2004. TLR9 is Localized in the Endoplasmic Reticulum Prior to Stimulation. *J Immun.* 173:1179-1183.