Technical Data Sheet

Alexa Fluor® 647 Mouse Anti-Human CD282

Product Information

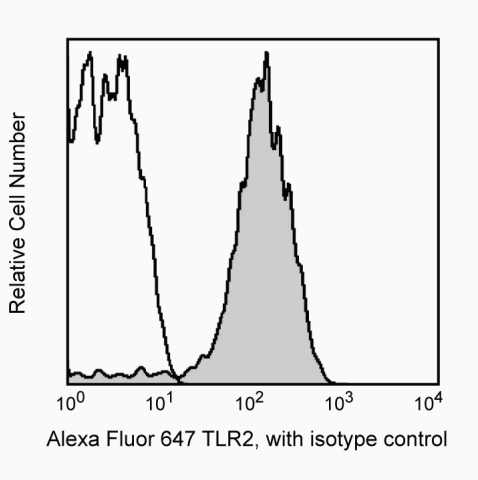
Material Number:	**558319**
Alternate Name:	TLR2
Size:	100 tests
Vol. per Test:	20 µl
Clone:	11G7
Immunogen:	Human TLR2-transfected cell line
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The monoclonal antibody 11G7 reacts with human CD282, which is also known as Toll-like receptor 2 (TLR2). It is primarily expressed by peripheral blood monocytes. Toll-like receptors (TLRs) play a critical role in anti-microbial resistance. Moreover, TLRs have been shown to activate a number of signal transduction pathways which lead to the induction of genes involved in host defense. TLRs are type-1 transmembrane receptors characterized by the presence of extracellular leucine-rich repeat and intracellular Toll/IL-1 receptor domains. At least 12 mammalian TLRs have been identified, each recognizing a distinct bacterial or viral pathogen-associated molecular pattern, termed PAMP. Peptidoglycan from Gram-positive bacteria, lipoproteins and lipopeptides from several bacteria, glycophosphatidylinositol, lipoarabinomannan, porins, and zymosan from yeast have been reported to be the ligands for TLR2.

It has been reported that mAb 11G7 inhibits the production of inflammatory cytokines via certain TLR2 ligands including TLR2/TLR1 ligands, lipoarabinomannan and PAM3CSK4. However, 11G7 antibody does not inhibit the production of inflammatory cytokines with zymosan, a TLR2/TLR6 ligand. Please note that this application has not been tested at BD Biosciences Pharmingen.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Expression of CD282 (TLR2) on monocytes. *Human blood cells were stained with either Alexa Fluor® 647 mAb 11G7 (shaded histogram) or Alexa Fluor 647 Mouse IgG1, κ isotype control mAb MOPC-21 (Cat. No. 557714, open histogram), and erythrocytes were lysed using BD Pharm Lyse™ lysing buffer (Cat. No. 555899). Monocytes were selected by scatter profile. TLR2 expression was detected on monocytes and granulocytes (data not shown), but not on lymphocytes (data not shown). Flow cytometry was performed on a BD™ FACSCalibur flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

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877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

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Suggested Companion Products

Catalog Number	Name	Size	Clone
557714	Alexa Fluor® 647 Mouse IgG1 κ Isotype Control	100 tests	MOPC-21

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
7. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
9. Alexa Fluor is a registered trademark of Molecular Probes, Inc., Eugene, OR.

References

Kurt-Jones EA, Mandell L, Whitney C, et al. Role of Toll-like receptor 2 (TLR2) in neutrophil activation: GM-CSF enhances TLR2 expression and TLR2-mediated interleukin 8 responses in neutrophils. *Blood.* 2002; 100(5):1860-1868. (Biology)

Lien E, Sellati TJ, Yoshimura A, et al. Toll-like receptor 2 functions as a pattern recognition receptor for diverse bacterial products. *J Biol Chem.* 1999; 274(47):33419-33425. (Biology)

Medzhitov R. Toll-like receptors and innate immunity. *Nat Rev Immunol.* 2001; 1(2):135-145. (Biology)

Sandor F, Latz E, Re F, et al. Importance of extra- and intracellular domains of TLR1 and TLR2 in NFκB signaling. *J Cell Biol.* 2003; 162(6):1099-1110. (Clone-specific)