

Technical Data Sheet

BV711 Mouse Anti-Human CD282 (TLR2)

Product Information

Material Number:	742770
Size:	50 µg
Clone:	11G7
Alternative Name:	TLR2; CD282; TIL4; Toll/interleukin-1 receptor-like protein 4
Reactivity:	Human (Tested in Development)
Isotype:	Mouse IgG1, κ
Immunogen:	Human TLR2-transfected cell line
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	7097
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The 11G7 monoclonal antibody specifically binds to human CD282, which is also known as Toll-like receptor 2 (TLR2). CD282 is expressed on monocytes, granulocytes, and dendritic cells. Toll-like receptors (TLRs) play a critical role in antimicrobial 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, glycosphosphatidylinositol, 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.

The antibody was conjugated to BD Horizon™ BV711 which is part of the BD Horizon Brilliant™ Violet family of dyes. This dye is a tandem fluorochrome of BD Horizon BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with BD Horizon BV711 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	

563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	
349202	Lysing Solution 10X Concentrate	100 NA	
564219	Human BD Fc Block™	50 mg	
563044	BV711 Mouse IgG1, k Isotype Control	50 µg	X40
564220	Human BD Fc Block™	0.25 mg	
566349	Brilliant Stain Buffer	1000 Tests	
566385	Brilliant Stain Buffer Plus	1000 Tests	

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
8. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
9. Cy is a trademark of GE Healthcare.
10. Alexa Fluor® is a registered trademark of Life Technologies Corporation.
11. This product may be covered by US Patent No. 7,388,080.
12. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
13. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
14. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.

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.

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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.

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