

# Technical Data Sheet

## BUV661 Rat Anti-Mouse CD6

### Product Information

Material Number:	750457
Size:	50 µg
Clone:	J90-462
Alternative Name:	Cd6; CD6 antigen
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat IgG2a, λ
Immunogen:	Mouse CD6 Peptide
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	12511
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The J90-462 monoclonal antibody specifically recognizes CD6. CD6 is a 105-130 kDa type I transmembrane glycoprotein that belongs to the scavenger receptor family. It is expressed on most thymocytes and peripheral T cells. CD6 is highly expressed on CD3-high thymocytes and expressed at lower levels on CD4+ CD8+ double positive and CD4+CD8- or CD4-CD8+ single positive thymocytes. CD6 is also reportedly expressed at low levels by some neurons. CD6 serves as a receptor for CD166, also known as Activated Leukocyte Cell Adhesion Molecule (ALCAM). CD6 plays a role in adhesion and migration during organogenesis. The CD6 intracellular domain is constitutively phosphorylated which suggests that CD6 may play a signaling role in T cell activation.

The antibody was conjugated to BD Horizon™ BUV661 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 661-nm. BD Horizon Brilliant BUV661 can be excited by the ultraviolet laser (355 nm) and detected with a 670/25 filter and a 630 nm LP. Due to cross laser excitation of this dye, there may be significant spillover into channels detecting APC-like emissions (eg, 670/25-nm filter).

Due to spectral differences between labeled cells and beads, using BD™ CompBeads can result in incorrect spillover values when used with BD Horizon BUV661 reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different BUV661 reagents (eg, CD4 vs. CD45) can have slightly different fluorescence spillover therefore, it may also be necessary to use clone-specific compensation controls when using these reagents.

### 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 BUV661 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
612973	BUV661 Rat IgG2a, κ Isotype Control	50 µg	R35-95
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
565804	Red Nucleic Acid Stain	0.5 mL	

554656	Stain Buffer (FBS)	500 mL
554657	Stain Buffer (BSA)	500 mL
563794	Brilliant Stain Buffer	100 Tests
555899	Lysing Buffer	100 mL

## 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 [wwwbdbiosciences.com/colors](http://wwwbdbiosciences.com/colors).
7. Please refer to [wwwbdbiosciences.com/us/s/resources](http://wwwbdbiosciences.com/us/s/resources) for technical protocols.
8. 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.
9. BD Horizon Brilliant Ultraviolet 661 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; 8,354,239.

## References

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- Singer NG, Fox DA, Haqqi TM, et al. CD6: expression during development, apoptosis and selection of human and mouse thymocytes.. *Int Immunol.* 2002; 14(6):585-97. (Biology: Flow cytometry).
- Starling GC, Whitney GS, Siadak AW, et al. Characterization of mouse CD6 with novel monoclonal antibodies which enhance the allogeneic mixed leukocyte reaction.. *Eur J Immunol.* 1996; 26(4):738-46. (Biology: Flow cytometry).
- Whitney G, Bowen M, Neubauer M, Aruffo A. Cloning and characterization of murine CD6.. *Mol Immunol.* 1995; 32(1):89-92. (Biology: Flow cytometry).

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