

# Technical Data Sheet

## BV711 Rat Anti-Mouse GITR Ligand

### Product Information

|                    |  |
|--------------------|--|
| Material Number:   | 742579   |
| Size:              | 50 µg  |
| Clone:             | MIH44  |
| Alternative Name:  | Tnfsf18; Gitrl; Glucocorticoid-induced-tumor necrosis factor receptor ligand |
| Reactivity:        | Mouse (Tested in Development)  |
| Isotype:           | Rat IgG2b, κ   |
| Immunogen:         | GITRL/GFP-transfected L cells  |
| Application:       | Flow cytometry (Qualified)   |
| Concentration:     | 0.2 mg/ml  |
| Entrez Gene ID:    | 240873   |
| Storage Buffer:    | Aqueous buffered solution containing ≤0.09% sodium azide.                    |
| Regulatory Status: | RUO  |

### Description

The MIH44 monoclonal antibody specifically binds to Glucocorticoid-induced TNF-related Ligand (GITR Ligand). The GITR Ligand protein is encoded by the Tnfsf18 ( Tumor necrosis factor ligand superfamily member 18 ) gene. The GITR Ligand is a type II transmembrane protein that is expressed on endothelial cells and antigen presenting cells, including B cells, macrophage and dendritic cells. The GITR Ligand reportedly costimulates T cell activation and reverses CD4+CD25+ Treg cell-mediated suppression by interaction with its cognate receptor, GITR that is expressed by these cells.

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 Section

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) RUO   | 500 mL    |       |
| 554657         | Stain Buffer (BSA) RUO   | 500 mL    |       |
| 563794         | Brilliant Stain Buffer RUO                                       | 100 Tests |       |
| 555899         | Lysing Buffer RUO  | 100 mL    |       |
| 553141         | Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO | 0.1 mg    |       |
| 563045         | BV711 Rat IgG2b, κ Isotype Control RUO                           | 50 µg     |       |

### 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](http://www.bdbiosciences.com/colors).
7. Please refer to [www.bdbiosciences.com/us/s/resources](http://www.bdbiosciences.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 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.
10. Cy is a trademark of GE Healthcare.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

## References

- Igarashi H, Cao Y, Iwai H, et al. GITR ligand-costimulation activates effector and regulatory functions of CD4+ T cells. *Biochem Biophys Res Commun*. 2008; 369(4):1134-1138.
- Piao J, Kamimura Y, Iwai H, et al. Enhancement of T-cell-mediated anti-tumour immunity via the ectopically expressed glucocorticoid-induced tumour necrosis factor receptor-related receptor ligand (GITRL) on tumours. *Immunology*. 2009; 127(4):489-499.

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