

# Technical Data Sheet

## BV711 Hamster Anti-Mouse CD30

### Product Information

Material Number:	740705
Size:	50 µg
Clone:	mCD30.1 (also known as 2SH12-5F-2D)
Alternative Name:	Cd30; Tnfrsf8; Ki; Ki--1; CD30L Receptor
Reactivity:	Mouse (Tested in Development)
Isotype:	Armenian Hamster IgG1, κ
Immunogen:	Mouse CD30-mouse IgG1 fusion protein
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	21941
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The mCD30.1 monoclonal antibody specifically recognizes CD30. CD30 is also known as Tumor necrosis factor receptor superfamily, member 8 (Tnfrsf8). The CD30 molecule is predominantly expressed by activated T lymphocytes, with its expression peaking at day 4-5 on spleen cells activated with plate-bound anti-CD3e antibody. The mCD30.1 antibody reacts with a majority of CD8+ T cells, as well as some CD4+ T cells in these cultures. Expression of CD30 on activated T lymphocytes is regulated by CD28 and cytokines. Its TNF-superfamily ligand, CD30L or CD153, is also expressed on activated T lymphocytes. By northern blot analysis, mouse Cd30 mRNA is detected in the thymus and in 72-hour pokeweed mitogen- and Con A-activated spleen cells, but not in the lung, brain, kidney, liver, bone marrow, unactivated spleen, or 72-hour LPS-activated splenocytes.<sup>1</sup> It has also been reported that CD30 is expressed on naive B lymphocytes, it is not detectable after activation, and it starts to return after 72 hours following activation. Reports suggest that signaling through the CD30 molecule may be important in cytokine production by CD8+ CTL lines and may play a role in the regulation of Th1 and Th2 cytokine secretion by CD4+ and CD8+ T cells. It has also been proposed that CD30 plays an important role in the negative selection of thymocytes and protects against autoimmunity. Members of the TNFR family and their ligands are involved in the induction of diverse biological responses in lymphocytes, including differentiation, proliferation, and cellular death. In humans, CD30 was initially identified in Hodgkin and Reed-Sternberg cells in Hodgkin's disease patients and subsequently was found on neoplastic cells of certain types of non-Hodgkin's lymphomas.

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
563128	BV711 Hamster IgG1, κ Isotype Control RUO	50 µg	

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

## 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 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 Amersham Biosciences Limited.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

## References

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