

# Technical Data Sheet

## BV711 Mouse Anti-Mouse Ly-49H

### Product Information

Material Number:	744264
Size:	50 µg
Clone:	3D10
Alternative Name:	Ly49h; Lymphocyte antigen 49H; Klra8; Cmv1; Cmv-1
Reactivity:	Mouse (Tested in Development)
Isotype:	Mouse BALB/c IgG1, κ
Immunogen:	Mouse Ly-49A/H Transfected Cell Line
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	16639
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

### Description

The 3D10 monoclonal antibody specifically binds to mouse Lymphocyte antigen 49H (Ly-49H; also known as Klra8 or Killer cell lectin-like receptor 8). The 3D10 antibody does not crossreact with related molecules such as Ly-49A, C, D or G2. Ly-49H is a type II transmembrane protein and a member of the Ly-49 C-type lectin multigene family of receptors expressed by NK cells. Cell surface Ly-49H is expressed by a subset of NK cells but not by NKT cells. Ly-49H is expressed by C57BL/6 and NWN A but not by BALB/c or DBA/2 mouse NK cells. Cell surface Ly-49H presents as a ~110 kDa disulfide-linked homodimer and associates with signaling subunits such as DAP10 and DAP12 for optimal transduction of intracellular activation signals. Crosslinking of Ly-49H with the 3D10 antibody reportedly induces NK cell cytotoxicity and cytokine production. Ly-49H recognizes the mouse cytomegalovirus m157 glycoprotein that is expressed by infected cells and is required for protection against cytomegalovirus infection.

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	
563044	BV711 Mouse IgG1, κ Isotype Control	50 µg	X40

## 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 GE Healthcare.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

## References

Brown MG, Dokun AO, Heusel JW, et al. Vital involvement of a natural cell activation receptor in resistance to viral infection. *Science*. 2001; 292(5518):934-937.

Smith HR, Chuang HH, Wang LL, Salcedo M, Heusel JW, Yokoyama WM. Nonstochastic Coexpression of activation receptors on murine Natural Killer cells. *J Exp Med*. 2000; 191(8):1341-1354.

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