Technical Data Sheet

BV421 Mouse Anti-Human Cytokeratin

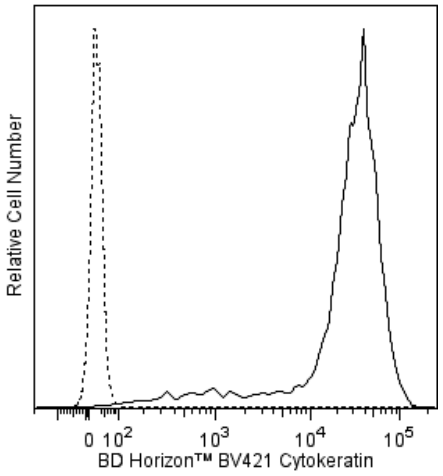
Product Information

Material Number:	**564709**
Alternate Name:	Cytokeratin-7/-8; CK-7/CK-8;
Size:	50 tests
Vol. per Test:	5 µl
Clone:	CAM5.2
Immunogen:	Human HT29 colorectal carcinoma cell line
Isotype:	Mouse (BALB/c) IgG2a
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The CAM5.2 monoclonal antibody specifically recognizes cytokeratin having a primary reactivity with human keratin proteins that correspond to Moll's peptides #7 (48 kDa) and #8 (52 kDa). Cytokeratin 7 and 8 are type II cytoskeletal keratins. These cytoskeletal proteins provide structural integrity for epithelial cells and may serve other functions as well. They are expressed in epithelia cells that comprise normal human tissues. Although these cytokeratins are not normally expressed in stratified squamous epithelium, they may be expressed in some squamous cell carcinomas. The CAM 5.2 antibody stains most epithelial-derived tissue, including liver, renal tubular epithelium, and hepatocellular and renal cell carcinomas.

The antibody was conjugated to BD Horizon BV421 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue conjugates.



Flow cytometric analysis of cytokeratin expression in human SK-BR-3 cells. *Cells from the human SK-BR-3 (Breast adenocarcinoma, ATCC HTB-30) cell line were incubated with 1X BD FACS™ Lysing Solution (Cat. No. 349202), permeabilized with BD FACS™ Permeabilizing Solution 2 (Cat. No. 340973/347692), and washed with BD Pharmingen™ Stain Buffer (FBS) (Cat. No. 554656). The cells were then stained with either BD Horizon™ BV421 Mouse IgG2a, κ Isotype Control (Cat. No. 562439; dashed line histogram) or BD Horizon BV421 Mouse Anti-Human Cytokeratin antibody (Cat. No. 564709; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.*

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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562439	BV421 Mouse IgG2a, k Isotype Control	50 µg	G155-178
349202	BD FACS™ Lysing Solution	100 ml	(none)
340973	Permeabilizing Solution 2	25 ml	(none)
347692	Permeabilizing Solution 2	10 ml	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Battifora H. Diagnostic uses of antibodies to keratins: A review and immunohistochemical comparison of seven monoclonal and three polyclonal antibodies. In: Fenoglio-Preiser C, Wolff M, Rilke F, ed. *Progress in Surgical Pathology.* 1988:1-15. (Biology)

Cooper D, Schermer A, Sun TT. Biology of disease classification of human epithelia and their neoplasms using monoclonal antibodies to keratins: strategies, applications and limitations. *Lab Invest.* 1985; 52:243-256. (Clone-specific)

Leader M, Patel J, Makin C, Henry K. An analysis of the sensitivity and specificity of the cytokeratin marker CAM 5.2 for epithelial tumors: results of a study of 203 sarcomas, 50 carcinomas, and 28 malignant melanomas. *Histopathology.* 1986; 10:1315-1324. (Clone-specific: Immunohistochemistry)

Makin C, Bobrow L, Bodmer W. Monoclonal antibody to cytokeratin for use in routine histopathology. *J Clin Pathol.* 1984; 37(9):975-983. (Immunogen)

Moll R, Franke W, Schiller D, Geiger B, Krepler R. The catalog of human cytokeratins: patterns of expression in normal epithelia, tumors, and cultured cells. *Cell.* 1982; 31:11-24. (Clone-specific)

Smedts F, Ramaekers F, Robben H, et al. Changing patterns of keratin expression during progression of cervical intraepithelial neoplasia. *Am J Pathol.* 1990; 136(3):657-668. (Clone-specific: Immunohistochemistry, Western blot)

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