

## Technical Data Sheet

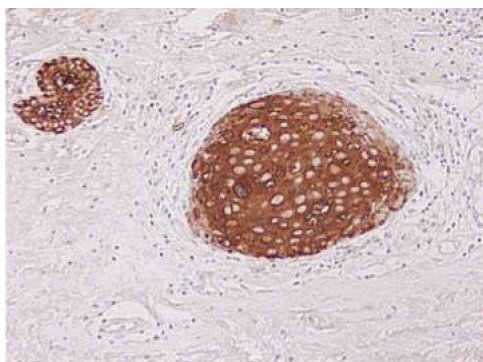
## Purified Mouse Anti-Human CD227

## Product Information

Material Number:	550486
Alternate Name:	MUC1
Size:	1.0 ml
Concentration:	500 µg/ml
Clone:	HMPV
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

## Description

Reacts with the core peptide of the MUC1 protein, a member of a family of mucin glycoproteins that are characterized by high carbohydrate content, O-linked oligosaccharides, high molecular weight (>200 kDa) and an amino acid composition rich in serine, threonine, proline and glycine. The core protein contains a domain of 20 amino-acid tandem repeats which function as multiple epitopes for the monoclonal antibody. Incomplete glycosylation of some tumor-associated mucins may lead to variable unmasking of the multiple peptide epitopes leading to the observed differences in staining intensity between normal and malignant tissues. This antibody has been shown to react with both normal and malignant epithelia of various tissues including breast and colon.



**Immunohistochemistry of MUC1 positive cells.**  
Formalin-fixed paraffin embedded sections of human breast cancer were reacted with the anti-MUC1 antibody. Tumor cells expressing MUC1 can be identified by the intense brown labeling of their cell membranes. Magnification 20X.

## Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Application Notes

## Application

Flow cytometry	Routinely Tested
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development
Immunohistochemistry-frozen	Tested During Development

## Recommended Assay Procedure:

**Immunohistochemistry:** The HMPV clone reactive against human MUC1 is recommended to test for immunohistochemical staining of formalin-fixed paraffin and acetone-fixed frozen sections. For paraffin sections microwave pretreatment with BD Retrieval A (pH 6.5) (Cat. No. 550524) is required. Tissue tested was human breast cancer tissue. The antibody stains normal and cancerous cells with a high carbohydrate content. The isotype control recommended for use with this antibody is purified mouse IgG1 (Cat. No. 550878). For optimal indirect immunohistochemical staining, HMPV antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with polyclonal, biotin conjugated anti-mouse Igs (multiple adsorbed) (Cat. No. 550337) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880). More conveniently, the Anti-Mouse Ig HRP detection kit (Cat. No. 551011) that contains the biotinylated secondary antibody, antibody diluent, Streptavidin-HRP and DAB substrate can be used for staining. A detailed protocol of the immunohistochemical procedure is available at our website, <http://www.bdbiosciences.com/support/resources>.

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## Suggested Companion Products

Catalog Number	Name	Size	Clone
550524	Retrievagen A (pH 6.0)	1000 ml	(none)
550878	Purified Mouse IgG1 $\kappa$ Isotype Control	1.0 ml	MOPC-31C
550337	Biotin Goat Anti-Mouse Ig (Multiple Adsorption)	1.0 ml	Polyclonal
550880	DAB Substrate Kit	500 tests	(none)
550946	Streptavidin HRP	50 ml	(none)
559148	Antibody Diluent for IHC	125 ml	(none)

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. 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.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
6. Please refer to [www.bdbiosciences.com/pharmlingen/protocols](http://www.bdbiosciences.com/pharmlingen/protocols) for technical protocols.

## References

Devine PL, Birrell GW, Whitehead RH, Harada H, Xing PX, McKenzie IF. Expression of MUC1 and MUC2 mucins by human tumor cell lines. *Tumour Biol.* 1992; 13(5):268-277. (Biology)

Xing PX, Prenzoska J, Layton GT, Devine PL, McKenzie IF. Second-generation monoclonal antibodies to intestinal MUC2 peptide reactive with colon cancer. *J Natl Cancer Inst.* 1992; 84(9):699-703. (Biology)

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