

CD44 (HCAM)

Format	Catalog no.	Pack size	Dilution
Concentrated	GB 318 A, B	0.1, 0.5 mL	1:100
Prediluted	GB 318 AA	6.0 mL	Ready to use

PRODUCT DESCRIPTION -

CD44 is an 80 kDa transmembrane glycoprotein that facilitates cell adhesion and is found in various normal tissues, including the tonsil, breast, prostate, skin, bladder, and cervical squamous epithelium. Research indicates that CD44, or HCAM, is significant in the spread and progression of human malignant tumors. In breast cancer research, assessing CD44 expression has been beneficial in distinguishing between benign and malignant papillary lesions. The expression of CD44s, the predominant CD44 isoform, has been correlated with enhanced survival in patients with node-negative invasive breast cancer. Subsequent research has demonstrated that a subpopulation of CD44+/CD24- breast cancer cells possesses stem/progenitor cell characteristics.

INTENDED USE -

CD44 [156-3C11] is a mouse monoclonal antibody designed for laboratory applications to qualitatively identify CD44 protein using immunohistochemistry (IHC) in formalin-fixed paraffin-embedded (FFPE) human tissues. The clinical assessment of any staining or its absence must be supplemented by morphological analyses with appropriate controls and should be considered in conjunction with the patient's clinical history and other diagnostic evaluations by a certified pathologist.

SUMMARY AND EXPLANATION -

CD44 is an 80 kDa transmembrane glycoprotein that facilitates cell adhesion and is expressed in various normal tissues, including the tonsil, breast, prostate, skin, bladder, and cervical squamous epithelium. Research indicates that CD44, or HCAM, is significant in the spread and progression of human malignant tumors. In breast cancer research, assessing CD44 expression has been beneficial in distinguishing between benign and malignant papillary tumors. The expression of CD44s, the predominant CD44 isoform, has been correlated with enhanced survival in patients with node-negative invasive breast cancer.

Subsequent research has indicated that a fraction of CD44+/CD24- breast cancer cells possess stem/progenitor cell characteristics.

PRINCIPLE OF PROCEDURE -

Antigen detection in tissues and cells is a multi-step immunohistochemistry procedure. The first step attaches the primary antibody to its designated epitope. A secondary antibody may be utilized to bind the primary antibody, then followed by an enzyme-labeled polymer; alternatively, an enzyme-labeled polymer may be directly administered to bind the primary antibody. The identification of the bound primary antibody is demonstrated by an enzyme-catalyzed colorimetric reaction.

SOURCE - : Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - 156-3C11

ISOTYPE - IgG2a

PROTEIN CONCENTRATION - ~10 mg/ml. Call for lot specific Ig concentration.

EPITOPE/ANTIGEN - CD44

CELLULAR LOCALISATION - Cytoplasmic/cell membrane

POSITIVE TISSUE CONTROL - Breast cancer or tonsil

KNOWN APPLICATIONS - Immunohistochemistry

30-40 min. At RT. Staining of formalin-fixed tissues requires heating tissue sections in between pH 7.4 - 9.0 for 45 min at 95°C followed by cooling at room temperature for 20 minutes.

SUPPLIED AS - Buffer with protein carrier and preservative

STORAGE AND STABILITY -

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

Materials required but not provided -

- 1) Positivetissuecontrol-Breastcancerortonsil

- 2) Negative control tissue (internal or external)
- 3) Microscope slides and coverslips
- 4) Staining jars or baths
- 5) Timer
- 6) Xylene or xylene substitute
- 7) Ethanol or reagent alcohol
- 8) Deionized or distilled water
- 9) Heating equipment or enzyme for tissue pretreatment step
- 10) Detection system
- 11) Chromogen
- 12) Wash buffer
- 13) Hematoxylin
- 14) Antibody diluents
- 15) Peroxide block
- 16) Light microscope
- 17) Mounting medium

LIMITATIONS-

The optimum antibody dilution and protocols for a specific application can vary. These include, but are not limited to fixation, heat-retrieval method, incubation times, tissue section thickness and detection kit used. Due to the superior sensitivity of these unique reagents, the recommended incubation times and titers listed are not applicable to other detection systems, as results may vary. The data sheet recommendations and protocols are based on exclusive use of Genebio products. Ultimately, it is the responsibility of the investigator to determine optimal conditions.