

## CD44

Format	Catalog no.	Pack size	Dilution
Concentrated	-	-	-
Prediluted	GB 380 AA	6.0 mL	Ready to use

**PRODUCT DESCRIPTION -**

CD44 antibody is an 80 kDa transmembrane glycoprotein found on T lymphocytes, granulocytes, erythrocytes, neuronal tissue, and epithelial cells. Research indicates that the standard isoform, CD44s, is present in various normal tissues, including the tonsil, skin, bladder, and cervical squamous epithelium. In breast cancer research, CD44 expression evaluated using immunohistochemistry indicated a positive prognostic factor in patients with node-negative invasive breast carcinoma. Subsequent research has demonstrated that a subpopulation of CD44+/CD24- cells in breast cancer has stem/progenitor cell characteristics.

**INTENDED USE -**

CD44 [BC8] 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 interpretation of any staining or its absence must be supplemented by morphological studies utilizing appropriate controls and assessed in conjunction with the patient's clinical history and other diagnostic tests by a skilled 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 processes of metastasis and the advancement of human malignant tumors. In breast cancer research, assessing CD44 expression has been beneficial for distinguishing between benign and malignant papillary tumors. The expression of CD44s, the predominant CD44 isoform, has been linked to enhanced survival in patients with node-negative invasive breast cancer. Subsequent research has demonstrated that a subpopulation of CD44+/CD24- breast cancer cells has 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. Subsequent to the tagging of the antigen with a primary antibody, an enzyme-conjugated polymer is introduced to bind to the primary antibody.

SOURCE - Mouse monoclonal

SPECIES REACTIVITY - Human; others not tested

CLONE - BC8

ISOTYPE - IgG1

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) Positive tissue control - Breast cancer or tonsil
- 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.