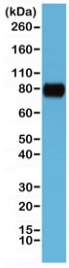
CD44 Antibody Extracellular Domain / Cell Surface Marker Antibody [clone RM264] (R20281)

Catalog No.	Formulation	Size
R20281-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

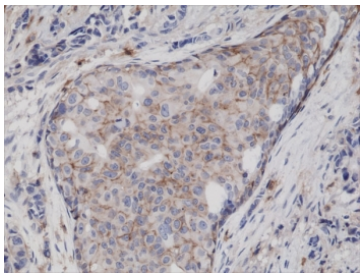
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM264
Purity	Protein A purified from animal origin-free supernatant
UniProt	P16070
Gene ID	960
Localization	Cell surface, cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1:1000-1:5000 (1) Western Blot : 1:1000-1:2000
Limitations	This CD44 Antibody Extracellular Domain / Cell Surface Marker Antibody is available for research use only.



CD44 Antibody Extracellular Domain Human Cell Line WB. Western blot analysis of CD44 / CD44 antigen expression in human HeLa cell lysate using recombinant rabbit monoclonal antibody clone RM264 at 1:1000. A band is detected at approximately 80 kDa, consistent with the predicted molecular weight of CD44 (CD44 / CD44 antigen). CD44 is a glycosylated transmembrane protein, and while a band near the predicted molecular weight represents the core protein, higher apparent molecular weight forms may be observed in some cell types due to variable glycosylation of the extracellular domain. The observed band supports detection of CD44 extracellular domain-associated protein expression in human cells.



CD44 Antibody Extracellular Domain Breast Cancer IHC. Immunohistochemistry analysis of CD44 / CD44 antigen expression in FFPE human breast cancer tissue using recombinant rabbit monoclonal antibody clone RM264. Membranous HRP-DAB brown staining is observed in tumor epithelial cells, outlining cell borders and highlighting cell surface localization consistent with extracellular domain detection of CD44. The staining pattern demonstrates heterogeneous expression across tumor cells and supports its use as a marker of cell surface distribution and tumor cell interaction within breast carcinoma tissue. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling at RT before testing.

Description

CD44 antigen (CD44) is a transmembrane glycoprotein of the CD44 family that functions as a receptor for hyaluronic acid and mediates cell adhesion, migration, and extracellular matrix interactions. It is expressed on the surface of a wide range of cell types, including epithelial cells, lymphocytes, and tumor cells, where it plays a central role in cell-cell communication and interaction with the extracellular environment. CD44 Antibody Extracellular Domain is designed to detect epitopes within the extracellular portion of the CD44 protein in formalin-fixed, paraffin-embedded tissues, enabling immunohistochemistry-based evaluation of cell surface localization and membrane-associated expression patterns. Because the extracellular domain is directly accessible at the cell surface, it provides a reliable target for detecting CD44 in its native membrane context.

CD44 antibody, also referred to as CD44 antigen antibody or Hermes antigen antibody, recognizes a protein that spans the cell membrane with a large extracellular domain responsible for ligand binding and interaction with hyaluronic acid. Targeting the extracellular domain allows direct detection of CD44 at the cell surface, providing clear visualization of membrane-associated expression and cell surface accessibility. Recombinant rabbit monoclonal antibody clone RM264 is designed to recognize CD44 in its extracellular region, supporting consistent detection of cell surface CD44 expression across tissue types.

Functionally, the extracellular domain of CD44 mediates binding to hyaluronic acid and other components of the extracellular matrix, enabling cells to interact dynamically with their surrounding environment. These interactions support processes such as cell adhesion, migration, and tissue organization, particularly at the interface between cells and the extracellular matrix. In immunohistochemistry applications, CD44 staining presents as strong, continuous membranous HRP-DAB signal outlining individual cell borders, reflecting its localization at the cell surface. This CD44 Antibody Extracellular Domain is particularly suited for examining membrane localization, cell surface distribution, and spatial organization of CD44-expressing cells in tissue sections.

CD44 expression is observed across multiple tissue types, including epithelial tissues and immune cell populations, where it contributes to normal tissue architecture and cellular communication. In tumor tissues, CD44 is frequently expressed on malignant cells and tumor-infiltrating immune cells, where it highlights cell surface interactions within the tumor microenvironment. Detection of extracellular domain expression therefore provides insight into cell surface biology, ligand interaction, and tissue organization in both normal and disease contexts.

Structurally, CD44 is encoded on chromosome 11p13 and consists of an extracellular ligand-binding domain, a transmembrane segment, and a cytoplasmic tail involved in intracellular signaling. The extracellular region contains binding sites for hyaluronic acid and other ligands, making it critical for mediating interactions with the extracellular matrix. CD44 isoforms generated through alternative splicing retain this extracellular functionality while varying in additional domains. An antibody targeting the extracellular domain of CD44 is suitable for detecting membrane-associated expression and studying cell surface interactions in a wide range of research applications.

This CD44 antibody is part of a broader CD44 antibody panel offered by NSJ Bioreagents.

Application Notes

The stated application concentrations are suggested starting points. Titration of the CD44 Antibody Extracellular Domain / Cell Surface Marker Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A peptide from the extracellular domain of human CD44 was used as the immunogen for this recombinant CD44 antibody.

Storage

Store the CD44 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

CD44 antibody, CD44 extracellular domain antibody, CD44 cell surface marker antibody, CD44 antigen antibody, Hermes antigen antibody