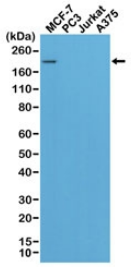
HER2 Antibody [clone RM228] (R20258)

Catalog No.	Formulation	Size
R20258-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	0.1 ml

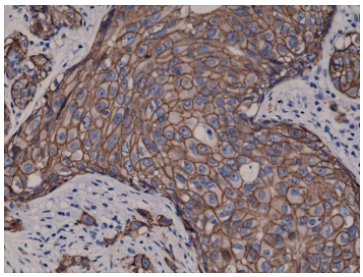
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM228
Purity	Protein A purified from animal origin-free supernatant
UniProt	P04626
Gene ID	2064
Localization	Cell surface, cytoplasm, nucleus
Applications	Immunohistochemistry (FFPE): 1:100-1:400 (1) Western blot: 1:1000
Limitations	This HER2 antibody is available for research use only.



HER2 Antibody Multi-Cell Line WB. Western blot analysis of MCF-7, PC3, Jurkat, and A375 cell lysates using HER2 Antibody detects a band at approximately 185 kDa in the MCF-7 breast cancer cell line, consistent with the predicted molecular weight of ErbB2 / HER2, while other cell lines show minimal or no signal, reflecting differential expression of HER2 across cell types.



HER2 Antibody Breast Cancer Tissue IHC. Immunohistochemistry analysis of FFPE human breast carcinoma tissue using HER2 Antibody demonstrates strong HRP-DAB brown membranous staining outlining tumor epithelial cells, consistent with ErbB2 / HER2 expression as a receptor tyrosine kinase, while surrounding stromal elements show minimal signal; nuclei are counterstained blue.

Description

The HER2 antibody is a recombinant reagent engineered to detect human HER2, also known as ErbB2, a receptor tyrosine kinase belonging to the epidermal growth factor receptor (EGFR) family. HER2 plays a crucial role in cell growth, survival, and differentiation through activation of downstream signaling cascades, including the PI3K-AKT and MAPK pathways. Unlike other EGFR family members, HER2 does not have a known ligand but functions as a preferred heterodimerization partner, amplifying signals when paired with receptors such as EGFR or HER3. The HER2 antibody provides a highly reliable tool for studying HER2 biology and for use in diagnostic or translational research.

HER2 is encoded by the ERBB2 gene, located on chromosome 17q12. Amplification or overexpression of HER2 occurs in approximately 15Ã¢Â€Â“20% of breast cancers and is also observed in gastric, ovarian, and lung cancers. HER2-positive tumors are associated with aggressive clinical behavior but also serve as targets for effective therapies such as trastuzumab, pertuzumab, and other monoclonal antibodies or small-molecule inhibitors. Detection of HER2 expression is therefore central to clinical decision-making, making the HER2 antibody a valuable reagent in both research and diagnostic contexts.

Structurally, HER2 consists of an extracellular ligand-binding domain, a single transmembrane helix, and an intracellular tyrosine kinase domain. Constitutive activation or overexpression of HER2 promotes oncogenic signaling, leading to uncontrolled proliferation and survival. The HER2 antibody detects epitopes within HER2 with high specificity, allowing accurate measurement of expression levels in tumor tissues, cell lines, and biological samples. Recombinant production ensures batch-to-batch consistency, an advantage over traditional hybridoma-derived antibodies, especially in applications requiring rigorous reproducibility.

In immunohistochemistry, the HER2 antibody highlights membrane localization of HER2 in tumor tissues, supporting clinical scoring of HER2 status. In western blotting, it detects HER2 protein in cell lysates, confirming overexpression or monitoring experimental manipulations. In immunofluorescence, the antibody reveals membrane-associated staining patterns, consistent with its role as a transmembrane receptor. It can also be used in flow cytometry to evaluate HER2 expression at the single-cell level. Synonym phrases such as ErbB2 antibody, HER2/neu antibody, and ERBB2 antibody expand accessibility for researchers using different nomenclature.

By providing validated and reproducible detection, the HER2 antibody supports studies ranging from basic receptor biology to translational oncology. NSJ Bioreagents validates this reagent under strict quality standards, ensuring reliable performance in immunohistochemistry, western blotting, immunofluorescence, and flow cytometry. With specificity for a critical oncogenic receptor, the HER2 antibody is an indispensable tool for understanding receptor tyrosine kinase signaling and for advancing cancer research.

This HER2 antibody reacts to Human c-erbB-2/HER-2. It may also react to mouse or rat c-erbB-2/HER-2, as predicted by immunogen homology.

For broad detection of HER2 (ErbB2) as a receptor tyrosine kinase, see our HER2 antibody.

Application Notes

The stated application concentrations are suggested starting points. Titration of the HER2 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 corresponding to the C-terminus of human c-erbB2/HER2 was used as the immunogen for this recombinant HER2 antibody.

Storage

Store the HER2 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).

Alternate Names

ErbB2 antibody, HER2 antibody, ERBB2 antibody, ErbB2 signaling antibody, HER2 pathway antibody

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