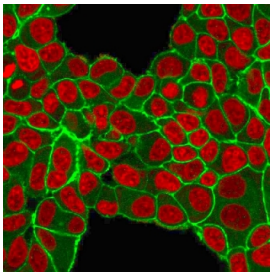
HER2 Antibody / Cell Surface Receptor Antibody [clone HRB2/451] (V2108)

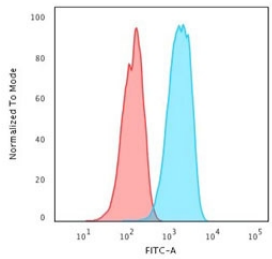
Catalog No.	Formulation	Size
V2108-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2108-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2108SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

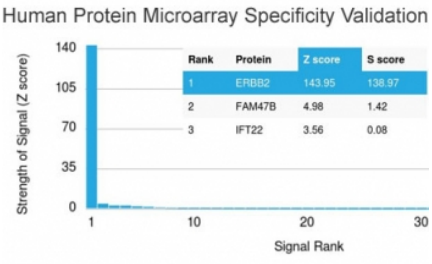
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HRB2/451
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	2064
Localization	Cell surface
Applications	ELISA: order BSA/sodium azide-free format for coating Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-4ug/ml
Limitations	This HER2 Antibody / Cell Surface Receptor Antibody is available for research use only.



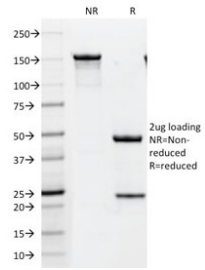
HER2 Antibody MCF-7 IF. Immunofluorescence analysis of PFA-fixed human MCF-7 cells using HER2 Antibody (green) demonstrates prominent membranous staining outlining cell borders, consistent with ErbB2 / HER2 localization as a cell surface receptor, while nuclei are counterstained with Reddot (red), supporting membrane-associated detection in cell-based assays.



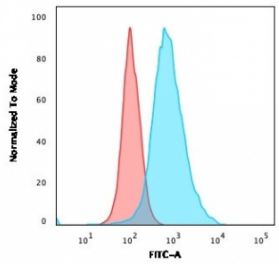
HER2 Antibody MCF-7 FACS. Flow cytometry analysis of human MCF-7 cells using HER2 Antibody shows a clear rightward shift in fluorescence intensity compared to isotype control, indicating cell surface expression of ErbB2 / HER2, consistent with its role as a membrane receptor involved in epithelial cell signaling.



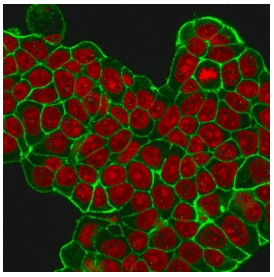
HER2 Antibody Microarray Specificity Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using HER2 Antibody (clone HRB2/451) demonstrates highly specific detection of ErbB2 / HER2, a cell surface receptor involved in epithelial and tumor signaling. The antibody shows a dominant signal for ERBB2 with clear separation from other proteins on the array, supporting strong target specificity of clone HRB2/451. Z- and S-score: The Z-score represents the strength of signal generated when the antibody binds to a protein on the array, expressed as standard deviations above the mean signal, while the S-score reflects the difference between sequential Z-scores and indicates relative specificity compared to potential off-target interactions.



SDS-PAGE analysis of purified, BSA-free HER2 antibody (clone HRB2/451) as confirmation of integrity and purity.



HER2 Antibody SK-BR3 High Expression FACS. Flow cytometry analysis of human SK-BR3 cells using HER2 Antibody shows a pronounced rightward fluorescence shift relative to isotype control, consistent with high-level surface expression of ErbB2 / HER2 in this HER2-amplified cell line, supporting its use for detecting elevated receptor density in cancer models.



HER2 Antibody MCF-7 Membrane IF. Immunofluorescence analysis of MeOH-fixed human MCF-7 cells using HER2 Antibody (green) highlights sharp, continuous membrane-associated staining with reduced cytoplasmic background, emphasizing ErbB2 / HER2 localization at cell-cell junctions, while nuclei are counterstained with Reddot (red), supporting detection of surface receptor architecture under methanol fixation conditions.

Description

ErbB2 receptor tyrosine kinase 2 (ERBB2), also known as HER2, is a transmembrane receptor localized primarily to the cell surface of epithelial and tumor cells, where it plays a central role in regulating cell signaling and growth. HER2 Antibody / Cell Surface Receptor Antibody (clone HRB2/451) targets this protein, enabling detection of membrane-associated HER2 expression in cellular and tissue contexts. HER2 antibody, also referred to as ErbB2 antibody and ERBB2 antibody in the literature, recognizes a key receptor involved in oncogenic signaling and cellular communication. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for

specificity across thousands of proteins.

HER2 is a member of the epidermal growth factor receptor family and functions through dimerization with other receptor family members, activating downstream signaling pathways such as PI3K/AKT and MAPK. These pathways regulate cell proliferation, survival, and differentiation, making HER2 a critical regulator of epithelial cell biology. Unlike other EGFR family members, HER2 does not require direct ligand binding and instead acts as a preferred dimerization partner, amplifying signaling intensity and duration.

The cell surface localization of HER2 is particularly important for studies involving receptor accessibility, membrane distribution, and signaling dynamics. In immunofluorescence and flow cytometry applications, HER2 is detected as a membrane-associated protein outlining cell borders, allowing for assessment of receptor density and heterogeneity across cell populations. These approaches are widely used to evaluate HER2 expression in cancer models and to investigate receptor trafficking and internalization.

HER2 expression is frequently elevated in cancers such as breast, gastric, and ovarian carcinoma, where increased receptor density at the cell surface contributes to enhanced signaling and tumor progression. In these contexts, HER2 serves as both a biomarker and a functional driver of disease. Detection of HER2 at the plasma membrane provides insight into receptor activation states and interactions with therapeutic agents targeting extracellular domains.

Structurally, HER2 consists of a large extracellular domain, a single transmembrane region, and an intracellular tyrosine kinase domain responsible for initiating signaling cascades. Following activation, HER2 may undergo internalization and recycling, contributing to dynamic regulation of receptor availability at the cell surface. This trafficking behavior is an important consideration in studies examining receptor turnover and signaling persistence.

Protein microarray validation supports specific detection of HER2 by this antibody, while IF and FACS data highlight its utility in cell surface receptor analysis across experimental systems.

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

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the HER2 Antibody / Cell Surface Receptor Antibody to be titered up or down for optimal performance.

Immunogen

Recombinant human protein was used as the immunogen for this HER2 antibody.

Storage

Store the HER2 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

HER2 antibody, ErbB2 antibody, HER2 membrane antibody, ERBB2 surface antibody, HER2 IF antibody

References (3)

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