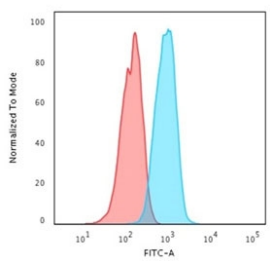
ErbB2 Antibody / HER2 Signaling Receptor Antibody [clone HRB2/718] (V2111)

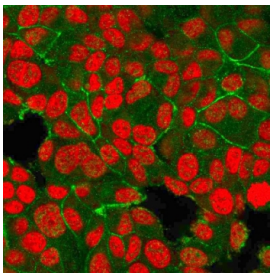
Catalog No.	Formulation	Size
V2111-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2111-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2111SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

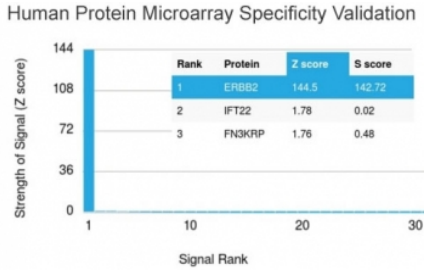
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HRB2/718
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	2064
Localization	Extracellular/Intracellular cell membrane
Applications	ELISA: order BSA/sodium azide-free format for coating Flow cytometry: 1-2ug/million cells Immunofluorescence: 0.5-1ug/ml
Limitations	This ErbB2 Antibody / HER2 Signaling Receptor Antibody is available for research use only.



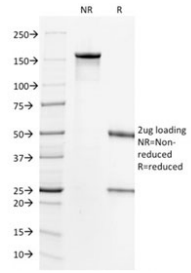
ErbB2 Antibody MCF-7 Signaling FACS. Flow cytometry analysis of human MCF-7 cells using ErbB2 Antibody (clone HRB2/718) shows a distinct rightward shift in fluorescence intensity compared to isotype control, indicating cell surface expression of HER2 / ErbB2, consistent with its role as a signaling receptor in epithelial cancer cells.



ErbB2 Antibody MCF-7 Signaling IF. Immunofluorescence analysis of PFA-fixed human MCF-7 cells using ErbB2 Antibody (clone HRB2/718, green) shows membranous and peri-membranous staining outlining cell borders with additional cytoplasmic signal, consistent with HER2 / ErbB2 localization and receptor trafficking associated with signaling activity, while nuclei are counterstained with Reddot (red).



ErbB2 Antibody Microarray Specificity Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using ErbB2 Antibody (clone HRB2/718) demonstrates highly specific detection of HER2 / ErbB2, a signaling receptor involved in receptor tyrosine kinase pathways. The antibody shows a dominant signal for ERBB2 with clear separation from other proteins on the array, supporting strong target specificity of clone HRB2/718. 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 / ErbB2 antibody (clone HRB2/718) as confirmation of integrity and purity.

Description

ErbB2 receptor tyrosine kinase 2 (ERBB2), also known as HER2, is a signaling receptor that plays a central role in regulating cellular growth, differentiation, and survival. ErbB2 Antibody / HER2 Signaling Receptor Antibody (clone HRB2/718) targets this protein, which is localized primarily at the cell membrane and participates in complex intracellular signaling networks. ErbB2 antibody, also referred to as HER2 antibody and ERBB2 antibody in the literature, detects a key component of receptor-mediated signaling pathways that influence both normal cellular function and disease progression. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

Functionally, ErbB2 acts as a preferred dimerization partner within the epidermal growth factor receptor family, enabling activation of downstream signaling cascades such as PI3K/AKT, MAPK, and JAK/STAT pathways. These pathways regulate essential cellular processes including proliferation, apoptosis resistance, and migration. The ability of ErbB2 to amplify signaling through heterodimer formation contributes to its potent biological effects, particularly in rapidly dividing or transformed cells.

ErbB2 expression is widely studied in cancer biology, where overexpression or amplification of the ERBB2 gene is associated with aggressive tumor behavior and altered signaling dynamics. Detection of ErbB2 supports investigation of pathway activation and receptor signaling intensity in tumor cells, as well as evaluation of therapeutic strategies targeting receptor function. In addition to oncology, ErbB2 signaling contributes to normal developmental processes and tissue homeostasis.

In immunofluorescence and flow cytometry applications, ErbB2 is typically observed as a membrane-associated receptor with additional cytoplasmic signal reflecting receptor trafficking and turnover. These techniques enable analysis of receptor distribution, expression levels, and population heterogeneity in cell-based systems. The ability to monitor ErbB2

signaling components in different cellular contexts supports studies of pathway regulation and cellular responses to environmental cues.

Structurally, ErbB2 contains an extracellular domain responsible for receptor interactions, a transmembrane region anchoring it to the plasma membrane, and an intracellular tyrosine kinase domain that mediates signal transduction. Upon activation, phosphorylation of key residues initiates downstream signaling events that regulate gene expression and cellular behavior.

Protein microarray validation confirms specific detection of ErbB2 by this antibody, supporting reliable identification of the target in signaling-focused studies. Combined with IF and FACS applications, this antibody enables detailed analysis of receptor-mediated pathways. 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 antibody to be titered up or down for optimal performance.

1. This ErbB2 Antibody / HER2 Signaling Receptor Antibody binds to the extracellular/cell surface region of the protein.

Immunogen

Recombinant human HER2 protein was used as the immunogen for this HER2 / ErbB2 antibody. Its epitope is localized in the extracellular domain.

Storage

Store the HER2 / ErbB2 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

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

References (3)

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