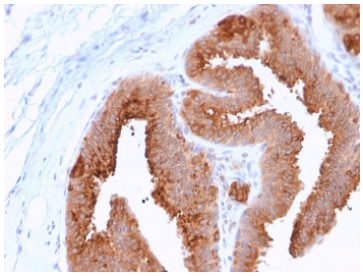
HER4 Antibody / ERBB4 Tumor Signaling Antibody [clone ERBB4/2581] (V7740)

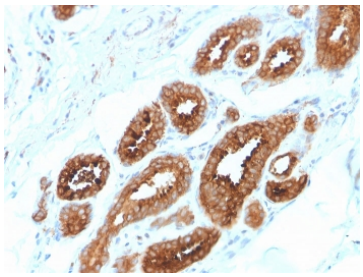
Catalog No.	Formulation	Size
V7740-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7740-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7740SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

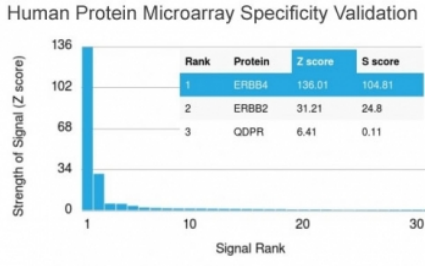
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	ERBB4/2581
Purity	Protein G affinity chromatography
UniProt	Q15303
Localization	Cytoplasmic, plasma membrane, nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This HER4 Antibody / ERBB4 Tumor Signaling Antibody is available for research use only.



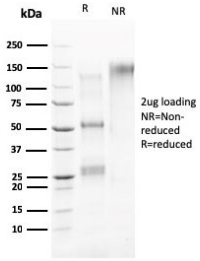
HER4 Antibody Breast Carcinoma Glandular IHC. Immunohistochemistry analysis of FFPE human breast carcinoma stained with a mouse monoclonal HER4 antibody (clone ERBB4/2581) shows strong HRP-DAB brown membranous and cytoplasmic staining in tumor epithelial cells forming glandular structures, consistent with ERBB4 expression, while surrounding stromal regions display minimal background; heat-induced epitope retrieval was performed in pH 9 Tris-EDTA buffer.



HER4 Antibody Breast Carcinoma Ductal IHC. Immunohistochemistry staining of FFPE human breast carcinoma using a protein microarray validated HER4 antibody (clone ERBB4/2581) demonstrates prominent membranous and cytoplasmic HRP-DAB brown signal in ductal tumor epithelial cells, consistent with ERBB4 expression, with low staining in adjacent stromal tissue; sections were subjected to heat-induced epitope retrieval in pH 9 Tris-EDTA buffer.



HER4 Antibody HuProt Microarray Specificity. Protein microarray analysis of HER4 Antibody / ERBB4 Tumor Signaling Antibody (clone ERBB4/2581) screened against more than 19,000 full-length human proteins identifies ERBB4 as the top-ranked target with the highest signal intensity, demonstrating strong specificity relative to other proteins on the array. Z-score reflects signal strength in standard deviations above the mean, while S-score indicates the relative separation between ranked targets, supporting selective recognition of ERBB4.



SDS-PAGE analysis of purified, BSA-free HER4 antibody (clone ERBB4/2581) as confirmation of integrity and purity.

Description

Receptor tyrosine-protein kinase erbB-4 (ERBB4), commonly known as HER4, is a member of the epidermal growth factor receptor family that regulates cell proliferation, differentiation, and survival signaling. HER4 antibody, also referred to as ERBB4 antibody and ErbB4 antibody in the literature, detects a transmembrane receptor expressed across multiple tissue types and involved in growth factor-mediated signaling pathways. Clone ERBB4/2581 is produced as a mouse monoclonal antibody and enables consistent detection of HER4 protein expression in research applications.

HER4 functions within the ERBB receptor family, which includes EGFR, HER2, and HER3. Upon binding to ligands such as neuregulins and other EGF-like growth factors, HER4 undergoes dimerization and autophosphorylation, activating downstream signaling pathways including PI3K-AKT, MAPK, and JAK-STAT cascades. These pathways regulate cellular growth, differentiation, and survival across a wide range of biological contexts.

In contrast to other ERBB family members, HER4 can undergo regulated proteolytic cleavage, releasing an intracellular domain that translocates to the nucleus and participates in transcriptional regulation. This feature contributes to the complex and context-dependent roles of HER4 in both normal physiology and disease states.

The ERBB4 gene is located on chromosome 2q34 and encodes multiple isoforms generated through alternative splicing. These isoforms differ in their cytoplasmic domain structure and signaling capacity, influencing tissue-specific functional outcomes. HER4 expression is observed in epithelial tissues, cardiac muscle, neural tissue, and mammary gland, where it contributes to developmental processes and tissue homeostasis.

Dysregulation of HER4 signaling has been implicated in breast cancer, ovarian cancer, and other malignancies. Depending on isoform expression and cellular context, HER4 has been reported to exhibit both tumor-promoting and differentiation-associated roles. Evaluation of HER4 expression is therefore important in studies of cancer biology and ERBB receptor signaling networks.

This HER4 antibody has been validated using protein microarray technology, supporting its specificity for ERBB4 among related protein targets. The mouse monoclonal clone ERBB4/2581 provides defined monoclonal detection suitable for receptor tyrosine kinase research and tumor signaling analysis.

HER2 is a member of the ERBB receptor family and plays a central role in receptor signaling; see our HER2 antibody page for detection of ERBB2 expression. This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the HER4 Antibody / ERBB4 Tumor Signaling Antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 1116-1269) was used as the immunogen for the protein microarray validated HER4 antibody.

Storage

Store the HER4 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

HER4 receptor antibody, ERBB4 receptor antibody, ErbB4 antibody, HER4 tyrosine kinase antibody, ERBB4 signaling antibody