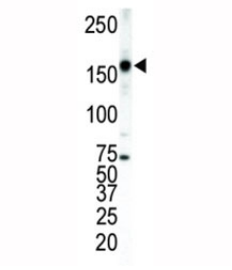
ERBB4 Antibody for Western blot / HER4 (F50605)

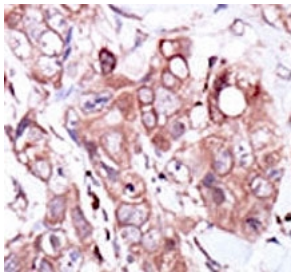
Catalog No.	Formulation	Size
F50605-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F50605-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	Q15303
Applications	Western Blot : 1:1000 IHC (Paraffin) : 1:50-1:100
Limitations	This ERBB4 antibody is available for research use only.



Western blot analysis of ERBB4 antibody in T47D cell lysate. Protein lysates from human T47D breast carcinoma cells were resolved by SDS-PAGE under reducing conditions and probed with ERBB4 antibody. A prominent immunoreactive band is detected at approximately 150-160 kDa, consistent with the predicted molecular weight of the full-length HER4 precursor (147-180 kDa). Possible additional lower molecular weight bands at approximately 120 kDa and 80 kDa may represent proteolytically cleaved forms of ERBB4 generated through regulated intramembrane processing. The observed banding pattern aligns with known HER4 receptor processing and cleavage dynamics.



IHC analysis of FFPE human breast carcinoma tissue stained with the ERBB4 antibody

Description

ERBB4 Antibody for western blot recognizes Erb-B2 receptor tyrosine kinase 4, commonly known as HER4, a member of the epidermal growth factor receptor family of receptor tyrosine kinases. ERBB4 antibody, also referred to as HER4 antibody and ErbB4 antibody in the literature, detects a transmembrane receptor involved in ligand-dependent signaling pathways that regulate proliferation, differentiation, and survival. This reagent is optimized for protein detection in denatured lysates, supporting analysis of ERBB4 expression by Western blot.

HER4 is activated upon binding to neuregulins and other EGF-like ligands, leading to receptor dimerization and autophosphorylation. Activation initiates downstream signaling cascades including PI3K-AKT, MAPK, and JAK-STAT pathways, which influence cell growth and transcriptional regulation. Unlike certain other ERBB family members, HER4 can undergo regulated intramembrane proteolysis, releasing an intracellular domain capable of nuclear translocation and gene modulation. These processing events can result in multiple detectable protein forms in lysate-based assays.

The ERBB4 gene, located on chromosome 2q34, generates several alternatively spliced isoforms that differ in their cytoplasmic domains and signaling properties. As a result, Western blot analysis may reveal full-length receptor as well as processed fragments depending on cell type, stimulation status, and proteolytic activity. ERBB4 expression has been documented in epithelial tissues, neural tissue, cardiac muscle, and various tumor types, making it an important target in cancer biology and growth factor signaling research.

Dysregulation of ERBB4 signaling has been implicated in breast cancer, ovarian carcinoma, and other malignancies. Depending on isoform distribution and cellular context, HER4 may contribute to differentiation-associated signaling or tumor progression. Reliable detection of ERBB4 protein levels in cell and tissue lysates is therefore central to studies of ERBB pathway activation and receptor processing dynamics.

ERBB4 Antibody for Western blot is suitable for research applications focused on HER4 protein expression, receptor cleavage analysis, and ERBB signaling pathway investigation in denatured protein samples.

Application Notes

Titration of the ERBB4 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 1276-1308 from the human protein was used as the immunogen for this ERBB4 antibody.

Storage

Aliquot the ERBB4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.