

BACKGROUND

ErbB4 is a member of the epidermal growth factor receptor (EGFR, ErbB) family that mediates responses to neuregulins and other EGF-like growth factors. It is a central regulator of cardiovascular and neural development as well as differentiation of the mammary gland. A role for ErbB4 has also been implicated in malignancies and heart diseases. Although expression of the ErbB4 receptor tyrosine kinase in breast cancer is generally regarded as a marker for favorable patient prognosis, controversial exceptions have been reported. Alternative splicing of ErbB4 pre-mRNAs results in the expression of distinct receptor isoforms with differential susceptibility to enzymatic cleavage and different downstream signaling protein recruitment potential that could affect tumor progression in different ways. Four structurally and functionally distinct ErbB4 isoforms have recently been identified.¹

ErbB4 is activated by binding of growth factors in the EGF family, which are encoded by at least nine genes. The ligand-activated receptors can signal either through homodimerization or through heterodimerization with other EGFR family members. Each receptor/ligand combination has the potential to recruit and activate a unique set of interacting proteins, thereby initiating signaling cascades which culminate in distinct cellular responses.² Autophosphorylation of Tyr1056 in ErbB4 may provide a docking site for downstream signaling components and is critical for coupling ErbB4 to prostate tumor suppression.³

References:

1. Muraoka-Cook, RS et al.: J Mammary Gland Biol Neoplasia.13:235-46,2008
2. Kaushansky, A et al.: Chem. Biol. 15: 808-817, 2008
3. Gallo, RM et al.: Biochem. Biophys. Res Commun. 349: 372-382, 2006

TECHNICAL INFORMATION

Source:

ErbB4/Her4 Antibody is a rabbit antibody raised against carboxyl-terminal sequence of human ErbB4.

Specificity and Sensitivity:

This antibody detects endogenous ErbB4 proteins without cross-reactivity with other family members.

Storage Buffer: Solution in phosphate-buffered saline, pH 7.2, containing 40% glycerol and 0.02% sodium azide

Storage:

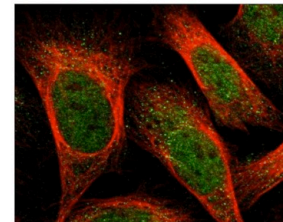
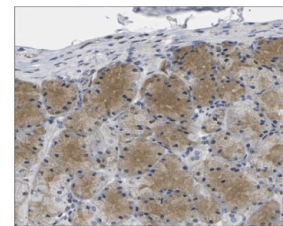
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:100-1:500
IP	n/d
IHC	1:50-1:200
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Top: Immunohistochemical staining of human stomach shows moderate cytoplasmic positivity in glandular cells.

Bottom: Immunofluorescent staining of human cell line U-2 OS shows positivity in nucleus but not nucleoli and cytoplasm.

