

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:

Phospho-ErbB4/HER4 (Tyr1056) antibody is a rabbit polyclonal antibody raised against an epitope near and including Tyr1056 of human ErbB4/HER4 sequence.

Specificity and Sensitivity:

This affinity purified antibody detects endogenous phospho-human ErbB4/HER4 proteins in various cell lysate.

Storage Buffer: PBS and 30% glycerol

Storage:

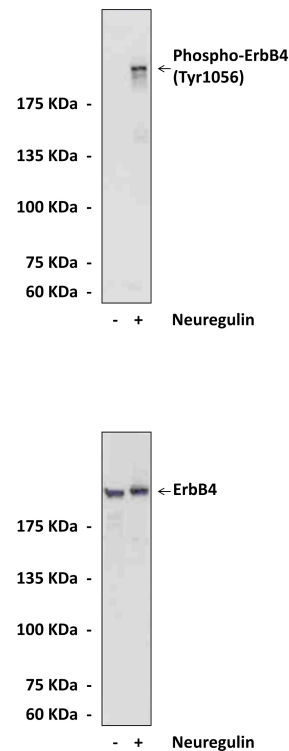
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC (Paraffin)	n/d
ICC	n/d
FACS	n/d

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

QUALITY CONTROL DATA



T47D cells were stimulated with neuregulin and subjected to Western Blot analysis using Phospho-ErbB4/HER4 (Tyr1056) antibody (**Top**), or ErbB4/HER4 antibody (**Bottom**).

