

ERBIN (K-13): sc-13249

BACKGROUND

The ErbB-2 receptor tyrosine kinase evolved as a shared co-receptor of all ErbB-specific growth factors and acts as a coordinator of a variety of biological signaling networks. ErbB-2 couples ErbB receptors to the migration/invasion machinery of carcinoma cells by employing adaptor proteins, such as p130CAS and c-Crk II, which regulate the Actin-Myosin cytoskeleton of migratory cells. ErbB-2 is expressed in basal cells of squamous epithelia and is important in the morphogenesis and oncogenesis of secretory epithelia. In epithelia, ErbB-2 employs the adaptor protein ERBIN (ErbB-2 interacting protein), which functions in the localization and signaling of ErbB-2. ERBIN contains a PDZ domain that directly and specifically interacts with ErbB-2, causing ERBIN and ErbB-2 to co-localize to the lateral membrane of intestinal epithelial cells. ERBIN provides further evidence to support the claim that the tumorigenic action of ErbB-2 may be attributed to its ability to act as a shared signaling subunit, rather than functioning as a distinct receptor.

REFERENCES

1. Pinkas-Kramarski, R., et al. 1997. ErbB receptors and EGF-like ligands: cell lineage determination and oncogenesis through combinatorial signaling. *J. Mammary Gland Biol. Neoplasia* 2: 97-107.
2. Xie, W., et al. 1998. Targeted expression of activated ErbB-2 to the epidermis of transgenic mice elicits striking developmental abnormalities in the epidermis and hair follicles. *Cell Growth Differ.* 9: 313-325.
3. Klapper, L.N., et al. 1999. The ErbB-2/HER2 oncoprotein of human carcinomas may function solely as a shared coreceptor for multiple stroma-derived growth factors. *Proc. Natl. Acad. Sci. USA* 96: 4995-5000.
4. Spencer, K.S., et al. 2000. ErbB-2 is necessary for induction of carcinoma cell invasion by ErbB family receptor tyrosine kinases. *J. Cell Biol.* 148: 385-397.
5. Borg, J.P., et al. 2000. ERBIN: a basolateral PDZ protein that interacts with the mammalian ErbB-2/HER2 receptor. *Nat. Cell Biol.* 2: 407-414.

CHROMOSOMAL LOCATION

Genetic locus: ERBB2IP (human) mapping to 5q12.3; Erbb2ip (mouse) mapping to 13 D1.

SOURCE

ERBIN (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ERBIN of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13249 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13249 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ERBIN (K-13) is recommended for detection of ERBIN of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ERBIN siRNA (h): sc-40541, ERBIN siRNA (m): sc-40542, ERBIN shRNA Plasmid (h): sc-40541-SH, ERBIN shRNA Plasmid (m): sc-40542-SH, ERBIN shRNA (h) Lentiviral Particles: sc-40541-V and ERBIN shRNA (m) Lentiviral Particles: sc-40542-V.

ERBIN (K-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Zhang, G., et al. 2008. Screening for EphB signaling effectors using SILAC with a linear ion trap-orbitrap mass spectrometer. *J. Proteome Res.* 7: 4715-4726.
2. Wilkes, M.C., et al. 2009. ERBIN and the NF2 tumor suppressor Merlin cooperatively regulate cell-type-specific activation of PAK2 by TGFβ. *Dev. Cell* 16: 433-444.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **ERBIN (10D2): sc-293468**, our highly recommended monoclonal alternative to ERBIN (K-13).