

ERBIN (H-210): sc-30054

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 (H-210) is a rabbit polyclonal antibody raised against amino acids 861-1070 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.

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.

APPLICATIONS

ERBIN (H-210) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

ERBIN (H-210) is also recommended for detection of ERBIN in additional species, including equine, canine, bovine and porcine.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Hua, G., et al. 2009. A negative feedback regulatory loop associates the tyrosine kinase receptor ERBB2 and the transcription factor GATA4 in breast cancer cells. *Mol. Cancer Res.* 7: 402-414.
2. Wilkes, M.C., et al. 2009. Erbin and the NF2 tumor suppressor Merlin cooperatively regulate cell-type-specific activation of PAK2 by TGF-β. *Dev. Cell* 16: 433-444.
3. Hu, Y., et al. 2013. Deficiency of erbin induces resistance of cervical cancer cells to anoikis in a STAT3-dependent manner. *Oncogenesis* 2: e52.

PROTOCOLS

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


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Try **ERBIN (10D2): sc-293468**, our highly recommended monoclonal alternative to ERBIN (H-210).