

ECOP (E-13): sc-138921

BACKGROUND

ECOP (EGFR-coamplified and overexpressed protein), also known as VOPP1 (vesicular, overexpressed in cancer, prosurvival protein 1) or GASP (glioblastoma-amplified secreted protein), is a 172 amino acid protein that is coamplified with EGFR and overexpressed in multiple glioblastomas. Highly expressed in ovary and thymus, ECOP is found at moderate levels in testis, colon, small intestine, and spleen, and at low levels in liver, placenta and prostate. ECOP regulates NF κ B signaling and may have a role in resistance to apoptosis. The gene encoding ECOP maps to human chromosome 7, which houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

1. Tsiouras, P., Myers, J.C., Ramirez, F. and Prockop, D.J. 1983. Restriction fragment length polymorphism associated with the pro α 2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
2. Collins, V.P. 1995. Gene amplification in human gliomas. *Glia* 15: 289-296.
3. Iwasaki, S., Usami, S., Abe, S., Isoda, H., Watanabe, T. and Hoshino, T. 2001. Long-term audiological feature in Pendred syndrome caused by PDS mutation. *Arch. Otolaryngol. Head Neck Surg.* 127: 705-708.
4. Eley, G.D., Reiter, J.L., Pandita, A., Park, S., Jenkins, R.B., Maihle, N.J. and James, C.D. 2002. A chromosomal region 7p11.2 transcript map: its development and application to the study of EGFR amplicons in glioblastoma. *Neurooncology* 4: 86-94.
5. Park, S. and James, C.D. 2005. ECop (EGFR-coamplified and overexpressed protein), a novel protein, regulates NF κ B transcriptional activity and associated apoptotic response in an I κ B α -dependent manner. *Oncogene* 24: 2495-2502.
6. Reiner, O., Sapoznik, S. and Sapir, T. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.
7. Hoffmann, A., Natoli, G. and Ghosh, G. 2006. Transcriptional regulation via the NF κ B signaling module. *Oncogene* 25: 6706-6716.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611915. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: VOPP1 (human) mapping to 7p11.2, LOC729086 (human) mapping to 1q21.2; Vopp1 (mouse) mapping to 6 B3.

SOURCE

ECOP (E-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ECOP of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138921 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ECOP (E-13) is recommended for detection of ECOP and LOC729086 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ECOP (E-13) is also recommended for detection of ECOP and LOC729086 in additional species, including equine and bovine.

Molecular Weight of ECOP: 22 kDa.

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) 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.

STORAGE

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

PROTOCOLS

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