

AKAP 12 (K-16): sc-48117

BACKGROUND

A-kinase anchor protein 12 (AKAP12), also known as Gravin, Ssecks and AKAP250, is a 1,782 amino acid cell growth related protein that is a member of the AKAP family and contains 3 AKAP domains and binds to the dimeric RII- α regulatory subunit of PKC. AKAP12 is an anchoring protein that mediates the compartmentalization of protein kinase A (PKA) and protein kinase C (PKC) and serves as a scaffold protein in signal transduction. AKAP12 is expressed in endothelial cells, cultured fibroblasts and osteosarcoma cells with localization in the cell cortex and cytoskeleton, but there does not appear to be expression in platelets, leukocytes, monocytic cell lines or peripheral blood cells. Patients with myasthenia gravis (MG) are able to produce antibodies against the C-terminus of AKAP12. The AKAP12 gene is conserved in chimpanzee, Rhesus monkey, canine, bovine, mouse, and rat. The human AKAP12 gene maps to chromosome 6q25.1.

REFERENCES

1. Nauert, J.B., et al. 1997. Gravin, an autoantigen recognized by serum from myasthenia gravis patients, is a kinase scaffold protein. *Curr. Biol.* 7: 52-62.
2. Choi, M.C., et al. 2004. AKAP12/Gravin is inactivated by epigenetic mechanism in human gastric carcinoma and shows growth suppressor activity. *Oncogene* 23: 7095-7103.
3. Streb, J.W., et al. 2004. Multiple promoters direct expression of three AKAP12 isoforms with distinct subcellular and tissue distribution profiles. *J. Biol. Chem.* 279: 56014-56023.
4. Su, B., et al. 2013. Adhesion-mediated cytoskeletal remodeling is controlled by the direct scaffolding of Src from FAK complexes to lipid rafts by SSeCKS/AKAP12. *Oncogene* 32: 2016-2026.
5. Mostafa, M.R., et al. 2013. Gravin gene expression in acute myeloid leukemia. *Med. Oncol.* 30: 548.

CHROMOSOMAL LOCATION

Genetic locus: AKAP12 (human) mapping to 6q25.1; Akap12 (mouse) mapping to 10 A1.

SOURCE

AKAP 12 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AKAP 12 of human origin.

PRODUCT

Each vial contains 200 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-48117 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

AKAP 12 (K-16) is recommended for detection of AKAP 12 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AKAP 12 (K-16) is also recommended for detection of AKAP 12 in additional species, including equine, bovine and porcine.

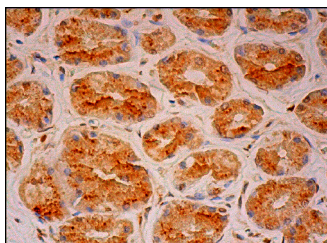
Suitable for use as control antibody for AKAP 12 siRNA (h): sc-40305, AKAP 12 siRNA (m): sc-44761, AKAP 12 shRNA Plasmid (h): sc-40305-SH, AKAP 12 shRNA Plasmid (m): sc-44761-SH, AKAP 12 shRNA (h) Lentiviral Particles: sc-40305-V and AKAP 12 shRNA (m) Lentiviral Particles: sc-44761-V.

Molecular Weight of AKAP 12 isoforms: 250/200/175 kDa.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



AKAP 12 (K-16): sc-48117. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **AKAP 12 (C-12): sc-376740** or **AKAP 12 (22): sc-293056**, our highly recommended monoclonal alternatives to AKAP 12 (K-16).