

AKAP 12 (H-300): sc-33577

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. Schott, M.B., et al. 2013. Receptor-mediated Ca²⁺ and PKC signaling triggers the loss of cortical PKA compartmentalization through the redistribution of gravin. *Cell. Signal.* 25: 2125-2135.

CHROMOSOMAL LOCATION

Genetic locus: AKAP12 (human) mapping to 6q25.1.

SOURCE

AKAP 12 (H-300) is a rabbit polyclonal antibody raised against amino acids 1482-1781 mapping at the C-terminus 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.

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.

APPLICATIONS

AKAP 12 (H-300) is recommended for detection of AKAP 12 isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

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

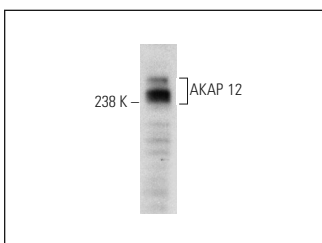
Molecular Weight of AKAP 12 isoforms: 250/200/175 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176.

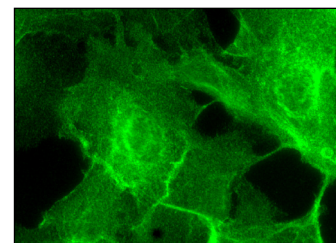
RECOMMENDED SECONDARY REAGENTS

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.

DATA



AKAP 12 (H-300): sc-33577. Western blot analysis of AKAP 12 expression in U-251 MG whole cell lysate.



AKAP 12 (H-300): sc-33577. Immunofluorescence staining of formalin-fixed HepG2 cells showing membrane and cytoplasmic localization.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **AKAP 12 (C-12): sc-376740**, our highly recommended monoclonal alternative to AKAP 12 (H-300).