

AKAP 12 (C-12): sc-376740

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 three 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.

CHROMOSOMAL LOCATION

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

SOURCE

AKAP 12 (C-12) is a mouse monoclonal 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 IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AKAP 12 (C-12) is available conjugated to agarose (sc-376740 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376740 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376740 PE), fluorescein (sc-376740 FITC), Alexa Fluor® 488 (sc-376740 AF488), Alexa Fluor® 546 (sc-376740 AF546), Alexa Fluor® 594 (sc-376740 AF594) or Alexa Fluor® 647 (sc-376740 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376740 AF680) or Alexa Fluor® 790 (sc-376740 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

AKAP 12 (C-12) is recommended for detection of AKAP 12 isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:100, 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), 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).

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.

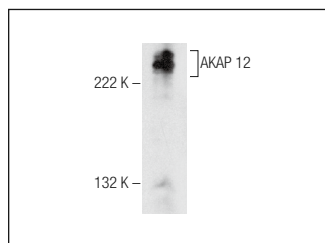
Molecular Weight of AKAP 12 isoforms: 250/200/175 kDa.

Positive Controls: HCT-116 whole cell lysate: sc-364175.

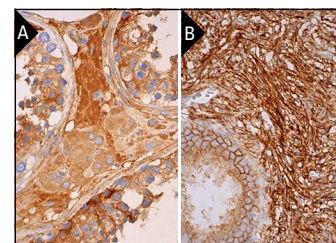
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistochemistry Mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AKAP 12 (C-12): sc-376740. Western blot analysis of AKAP 12 expression in HCT-116 whole cell lysate.



AKAP 12 (C-12): sc-376740. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing membrane staining of follicle cells and membrane and cytoplasmic staining of ovarian stroma cells (B).

SELECT PRODUCT CITATIONS

- Fonseca-Camarillo, G., et al. 2021. AKAP12/Gravin is over-expressed in patients with ulcerative colitis. *Immunol. Res.* 69: 429-435.
- Mircea, M., et al. 2022. Phiclust: a clusterability measure for single-cell transcriptomics reveals phenotypic subpopulations. *Genome Biol.* 23: 18.

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 for detailed protocols and support products.

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