

ACTR6 (G-8): sc-514988

BACKGROUND

ACTR6 (Actin-related protein 6), also known as ARP6, HSPC281 or CDA12, is a 396 amino acid protein that localizes to the cytoplasm and the cytoskeleton and belongs to the Actin family. The gene that encodes ACTR6 maps to human chromosome 12, which encodes over 1,100 genes within 132 million bases, making up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12 including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Noonan syndrome, which includes heart and facial developmental defects among the primary symptoms, is caused by a mutant form of PTPN11 gene product, SH-PTP2. Chromosome 12 is also home to a homeobox gene cluster which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster encoding C-type lectin proteins which mediate the NK cell response to MHC I interaction. Trisomy 12p leads to facial development defects, seizure disorders and a host of other symptoms varying in severity depending on the extent of mosaicism and is most severe in cases of complete trisomy.

REFERENCES

1. Ilen, T.L., et al. 1996. Cytogenetic and molecular analysis in trisomy 12p. *Am. J. Med. Genet.* 63: 250-256.
2. Yang, W. and Cole, W.G. 1998. Low basal transcripts of the COL2A1 collagen gene from lymphoblasts show alternative splicing of exon 12 in the Kniest form of spondyloepiphyseal dysplasia. *Hum. Mutat.* 1: S1-S2.
3. Kato, M., et al. 2001. Novel actin-related proteins in vertebrates: similarities of structure and expression pattern to Arp6 localized on *Drosophila* heterochromatin. *Gene* 268: 133-140.
4. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. *Immunol. Rev.* 181: 20-38.

CHROMOSOMAL LOCATION

Genetic locus: ACTR6 (human) mapping to 12q23.1; Actr6 (mouse) mapping to 10 C2.

SOURCE

ACTR6 (G-8) is a mouse monoclonal antibody raised against amino acids 168-396 mapping at the C-terminus of ACTR6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACTR6 (G-8) is available conjugated to agarose (sc-514988 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514988 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514988 PE), fluorescein (sc-514988 FITC), Alexa Fluor® 488 (sc-514988 AF488), Alexa Fluor® 546 (sc-514988 AF546), Alexa Fluor® 594 (sc-514988 AF594) or Alexa Fluor® 647 (sc-514988 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514988 AF680) or Alexa Fluor® 790 (sc-514988 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ACTR6 (G-8) is recommended for detection of ACTR6 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for ACTR6 siRNA (h): sc-95955, ACTR6 siRNA (m): sc-140848, ACTR6 shRNA Plasmid (h): sc-95955-SH, ACTR6 shRNA Plasmid (m): sc-140848-SH, ACTR6 shRNA (h) Lentiviral Particles: sc-95955-V and ACTR6 shRNA (m) Lentiviral Particles: sc-140848-V.

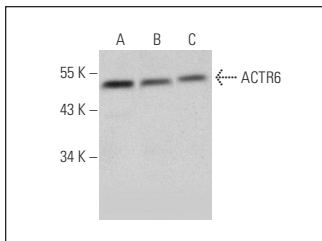
Molecular Weight of ACTR6: 46 kDa.

Positive Controls: A549 cell lysate: sc-2413, Jurkat whole cell lysate: sc-2204 or RT-4 whole cell lysate: sc-364257.

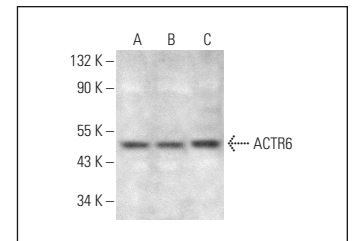
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ACTR6 (G-8): sc-514988. Western blot analysis of ACTR6 expression in Jurkat (A), A549 (B) and RT-4 (C) whole cell lysates.



ACTR6 (G-8): sc-514988. Western blot analysis of ACTR6 expression in Jurkat (A), ALL-SIL (B) and PC-12 (C) whole cell lysates.

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.

PROTOCOLS

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