

ACTR10 (E-6): sc-515293

BACKGROUND

ACTR10 (Actin-related protein 10), also known as ARP11 or HARP11, is a 417 amino acid protein that localizes to the cytoplasm and the cytoskeleton and belongs to the Actin family. The gene that encodes ACTR10 maps to human chromosome 14, which contains about 700 genes and 106 million base pairs and makes up about 3.5% of human cellular DNA. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease. The SERPINA1 gene is located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, a disorder characterized by severe lung complications and liver dysfunction. Notably, the immunoglobulin heavy chain locus is found on chromosome 14 and has been identified as a fusion with the chromosome 19 encoded protein Bcl3 in the (14;19) translocations found in a variety of B cell malignancies.

REFERENCES

1. Eckley, D.M. and Schroer, T.A. 2003. Interactions between the evolutionarily conserved, Actin-related protein, Arp11, Actin, and Arp1. *Mol. Biol. Cell* 14: 2645-2654.
2. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. *Nature* 421: 601-607.
3. Godbolt, A.K., et al. 2004. A presenilin 1 R278I mutation presenting with language impairment. *Neurology* 63: 1702-1704.

CHROMOSOMAL LOCATION

Genetic locus: ACTR10 (human) mapping to 14q23.1; Actr10 (mouse) mapping to 12 C3.

SOURCE

ACTR10 (E-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-18 at the N-terminus of ACTR10 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.

ACTR10 (E-6) is available conjugated to agarose (sc-515293 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515293 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515293 PE), fluorescein (sc-515293 FITC), Alexa Fluor[®] 488 (sc-515293 AF488), Alexa Fluor[®] 546 (sc-515293 AF546), Alexa Fluor[®] 594 (sc-515293 AF594) or Alexa Fluor[®] 647 (sc-515293 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515293 AF680) or Alexa Fluor[®] 790 (sc-515293 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515293 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

ACTR10 (E-6) is recommended for detection of ACTR10 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ACTR10 siRNA (h): sc-92136, ACTR10 siRNA (m): sc-140846, ACTR10 shRNA Plasmid (h): sc-92136-SH, ACTR10 shRNA Plasmid (m): sc-140846-SH, ACTR10 shRNA (h) Lentiviral Particles: sc-92136-V and ACTR10 shRNA (m) Lentiviral Particles: sc-140846-V.

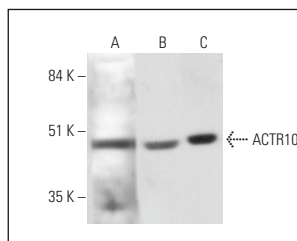
Molecular Weight of ACTR10: 46 kDa.

Positive Controls: human adrenal gland extract: sc-363761, ACTR10 (m): 293T Lysate: sc-118230 or U-2 OS cell lysate: sc-2295.

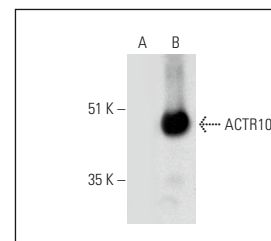
RECOMMENDED SUPPORT REAGENTS

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.

DATA



ACTR10 (E-6): sc-515293. Western blot analysis of ACTR10 expression in PC-3 (A) and U-2 OS (B) whole cell lysates and human adrenal gland tissue extract (C).



ACTR10 (E-6): sc-515293. Western blot analysis of ACTR10 expression in non-transfected: sc-117752 (A) and mouse ACTR10 transfected: sc-118230 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Majstrowicz, K., et al. 2021. Coordination of mitochondrial and cellular dynamics by the Actin-based motor Myo19. *J. Cell Sci.* 134: jcs255844.

RESEARCH USE

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

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