

ACTR5 (F-12): sc-376364

BACKGROUND

ACTR5 (Actin-related protein 5), also known as ARP5 or INO80M, is a 607 amino acid protein that belongs to the Actin family. Functioning as a component of the INO80 chromatin remodeling complex, ACTR5 interacts with a variety of other Actin-related proteins and, via these interactions, is thought to be involved in transcriptional regulation events. The gene encoding ACTR5 maps to chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

- Collins, S., et al. 2001. Gerstmann-Sträussler-Scheinker syndrome, fatal familial insomnia and kuru: a review of these less common human transmissible spongiform encephalopathies. *J. Clin. Neurosci.* 8: 387-397.
- Shen, X., et al. 2003. Involvement of Actin-related proteins in ATP-dependent chromatin remodeling. *Mol. Cell* 12: 147-155.
- van Attikum, H., et al. 2004. Recruitment of the INO80 complex by H2A phosphorylation links ATP-dependent chromatin remodeling with DNA double-strand break repair. *Cell* 119: 777-788.
- Jin, J., et al. 2005. A mammalian chromatin remodeling complex with similarities to the yeast INO80 complex. *J. Biol. Chem.* 280: 41207-41212.
- Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. *Epilepsia* 47: 543-549.

CHROMOSOMAL LOCATION

Genetic locus: ACTR5 (human) mapping to 20q11.23; Actr5 (mouse) mapping to 2 H1.

SOURCE

ACTR5 (F-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 39-71 near the N-terminus of ACTR5 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACTR5 (F-12) is available conjugated to agarose (sc-376364 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376364 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376364 PE), fluorescein (sc-376364 FITC), Alexa Fluor® 488 (sc-376364 AF488), Alexa Fluor® 546 (sc-376364 AF546), Alexa Fluor® 594 (sc-376364 AF594) or Alexa Fluor® 647 (sc-376364 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376364 AF680) or Alexa Fluor® 790 (sc-376364 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376364 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

ACTR5 (F-12) is recommended for detection of ACTR5 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 ACTR5 siRNA (h): sc-72442, ACTR5 siRNA (m): sc-140847, ACTR5 shRNA Plasmid (h): sc-72442-SH, ACTR5 shRNA Plasmid (m): sc-140847-SH, ACTR5 shRNA (h) Lentiviral Particles: sc-72442-V and ACTR5 shRNA (m) Lentiviral Particles: sc-140847-V.

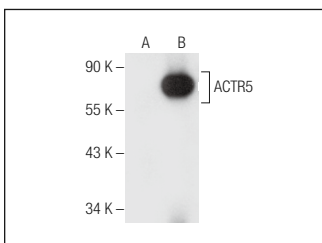
Molecular Weight of ACTR5: 68 kDa.

Positive Controls: ACTR5 (h): 293T Lysate: sc-114374 or Saos-2 cell lysate: sc-2235.

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



ACTR5 (F-12): sc-376364. Western blot analysis of ACTR5 expression in non-transfected: sc-117752 (A) and human ACTR5 transfected: sc-114374 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Xu, X., et al. 2022. ACTR5 controls CDKN2A and tumor progression in an INO80-independent manner. *Sci. Adv.* 8: eadc8911.

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.