

ANKRD2 (D-15): sc-138111

BACKGROUND

Ankyrins are membrane adaptor molecules that play important roles in coupling integral membrane proteins to the spectrin-based cytoskeleton network. Mutations of ankyrin genes lead to severe genetic diseases such as fatal cardiac arrhythmias and hereditary spherocytosis. ANKRD2 (ankyrin repeat domain 2), also known as ARPP or skeletal muscle ankyrin repeat protein, is a 360 amino acid protein involved in skeletal muscle hypertrophy that is expressed in slow fibers of skeletal and cardiac muscles and found in kidney, to a lesser extent. ANKRD2 is a member of the conserved muscle ankyrin repeat protein (MARP) family, whose expression can be triggered by injury, hypertrophy or physiological stress. Expressed as two alternatively spliced isoforms, ANKRD2 contains five ANK repeats and is encoded by a gene that maps to human chromosome 10q24.2.

REFERENCES

1. Kemp, T.J., et al. 2000. Identification of Ankrd2, a novel skeletal muscle gene coding for a stretch-responsive ankyrin-repeat protein. *Genomics* 66: 229-241.
2. Pallavicini, A., et al. 2001. Characterization of human skeletal muscle ANKRD2. *Biochem. Biophys. Res. Commun.* 285: 378-386.
3. Nakamura, K., et al. 2002. Altered expression of cardiac ankyrin repeat protein and its homologue, ankyrin repeat protein with PEST and proline-rich region, in atrophic muscles in amyotrophic lateral sclerosis. *Pathobiology* 70: 197-203.
4. Miller, M.K., et al. 2003. The muscle ankyrin repeat proteins: CARP, ANKRD2/ARPP and DARP as a family of Titin filament-based stress response molecules. *J. Mol. Biol.* 333: 951-964.

CHROMOSOMAL LOCATION

Genetic locus: ANKRD2 (human) mapping to 10q24.2; Ankrd2 (mouse) mapping to 19 C3.

SOURCE

ANKRD2 (D-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ANKRD2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138111 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

ANKRD2 (D-15) is recommended for detection of ANKRD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other ANKRD family members.

ANKRD2 (D-15) is also recommended for detection of ANKRD2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ANKRD2 siRNA (h): sc-90498, ANKRD2 siRNA (m): sc-141082, ANKRD2 shRNA Plasmid (h): sc-90498-SH, ANKRD2 shRNA Plasmid (m): sc-141082-SH, ANKRD2 shRNA (h) Lentiviral Particles: sc-90498-V and ANKRD2 shRNA (m) Lentiviral Particles: sc-141082-V.

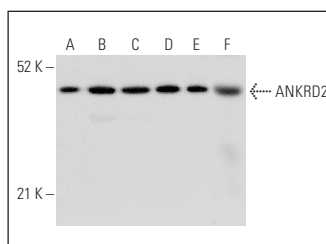
Molecular Weight of ANKRD2: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-673 cell lysate: sc-2414 or Hep G2 cell lysate: sc-2227.

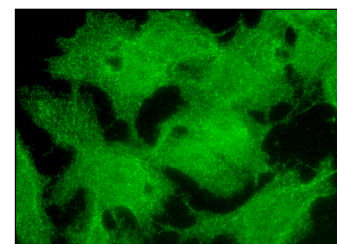
RECOMMENDED SECONDARY REAGENTS

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



ANKRD2 (D-15): sc-138111. Western blot analysis of ANKRD2 expression in Jurkat (A), A-673 (B), HT-1080 (C), HeLa (D) and Hep G2 (E) whole cell lysates and mouse skeletal muscle tissue extract (F).



ANKRD2 (D-15): sc-138111. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Mohamed, J.S., et al. 2013. Ankyrin repeat domain protein 2 and inhibitor of DNA binding 3 cooperatively inhibit myoblast differentiation by physical interaction. *J. Biol. Chem.* 288: 24560-24568.