

SmarcAL1 (G-20): sc-54518

BACKGROUND

SmarcAL1 (SWI/SNF-related matrix-associated Actin-dependent regulator of chromatin subfamily A-like protein 1), also known as HARP (HepA-related protein) or HHARP, is a 954 amino acid member of the SWI/SNF family of helicase and ATPase proteins. Localized to the nucleus, SmarcAL1 is a ubiquitously expressed protein that functions in ATP-dependent nucleosome-remodeling activities. SmarcAL1 contains one conserved C-terminal Snf2 domain, one helicase ATP-binding domain and two HARP (HepA-related) domains. Defects in the gene encoding SmarcAL1 are the cause of Schimke immuno-osseous dysplasia (SIOD), an autosomal recessive disorder characterized by renal dysfunction, spondyloepiphyseal dysplasia and T cell immunodeficiency.

REFERENCES

1. Coleman, M.A., et al. 2002. Cloning and characterization of HARP/SmarcAL1: a prokaryotic HepA-related Snf2 helicase protein from human and mouse. *Genomics* 65: 274-282.
2. Boerkoel, C.F., et al. 2002. Mutant chromatin remodeling protein SmarcAL1 causes Schimke immuno-osseous dysplasia. *Nat. Genet.* 30: 215-220.
3. Lou, S., et al. 2002. Longevity in Schimke immuno-osseous dysplasia. *J. Med. Genet.* 39: 922-925.
4. Lücke, T., et al. 2005. Schimke-immuno-osseous dysplasia: new mutation with weak genotype-phenotype correlation in siblings. *Am. J. Med. Genet. A.* 135: 202-205.
5. Kilic, S.S., et al. 2005. Association of migraine-like headaches with Schimke immuno-osseous dysplasia. *Am. J. Med. Genet. A.* 135: 206-210.
6. Bökenkamp, A., et al. 2005. R561C missense mutation in the SmarcAL1 gene associated with mild Schimke immuno-osseous dysplasia. *Pediatr. Nephrol.* 20: 1724-1728.
7. Elizondo, L.I., et al. 2006. Schimke immuno-osseous dysplasia: a cell autonomous disorder? *Am. J. Med. Genet. A.* 140: 340-348.

CHROMOSOMAL LOCATION

Genetic locus: SMARCAL1 (human) mapping to 2q35.

SOURCE

SmarcAL1 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SmarcAL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54518 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SmarcAL1 (G-20) is recommended for detection of SmarcAL1 of human origin by Western Blotting (starting dilution 1:200, 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 SmarcAL1 siRNA (h): sc-63042, SmarcAL1 shRNA Plasmid (h): sc-63042-SH and SmarcAL1 shRNA (h) Lentiviral Particles: sc-63042-V.

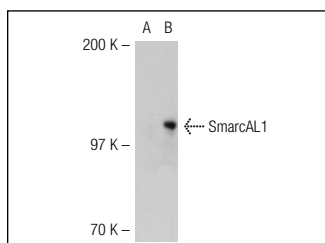
Molecular Weight of SmarcAL1: 110 kDa.

Positive Controls: DU 145 nuclear extract: sc-24960, SmarcAL1 (h): 293 Lysate: sc-113334 or DU 145 cell lysate: sc-2268.

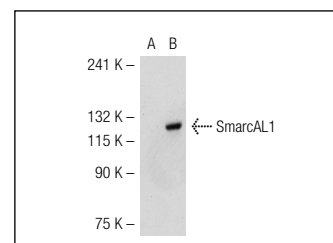
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SmarcAL1 (G-20): sc-54518. Western blot analysis of SmarcAL1 expression in non-transfected: sc-110760 (A) and human SmarcAL1 transfected: sc-113334 (B) 293 whole cell lysates.



SmarcAL1 (G-20) sc-54518. Western blot analysis of SmarcAL1 expression in non-transfected: sc-117752 (A) and human SmarcAL1 transfected: sc-115969 (B) 293T 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.



Try **SmarcAL1 (A-2): sc-376377** or **SmarcAL1 (E-12): sc-166209**, our highly recommended monoclonal alternatives to SmarcAL1 (G-20).