

# AKNAD1 (S-12): sc-240112

## BACKGROUND

AKNAD1 (AKNA domain containing 1) is an 836 amino acid coiled-coil protein belonging to the AKNA family. Existing as four alternatively spliced isoforms, AKNAD1 is encoded by a gene that maps to human chromosome 1p13.3. As the largest human chromosome, chromosome 1 makes up approximately 8% of the human genome and contains 260 million base pairs encoding 3,000 genes. Numerous diseases are linked to chromosome 1, notably the rare aging disease Hutchinson-Gilford progeria, which is associated with Lamin A. When defective, Lamin A can accumulate in nucleus, causing characteristic nuclear blebs. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinson's disease, Gaucher disease and Usher syndrome are also associated with chromosome 1. Aberrations in chromosome 1 exist in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

## REFERENCES

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- Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
- Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
- McClintock, D., et al. 2006. Hutchinson-Gilford progeria mutant lamin A primarily targets human vascular cells as detected by an anti-Lamin A G608G antibody. *Proc. Natl. Acad. Sci. USA* 103: 2154-2159.
- Bowden, N.A., et al. 2007. Gene expression profiling in familial adenomatous polyposis adenomas and desmoid disease. *Hered. Cancer Clin. Pract.* 5: 79-96.
- Kirpich, I.A., et al. 2010. Integrated hepatic transcriptome and proteome analysis of mice with high-fat diet-induced nonalcoholic fatty liver disease. *J. Nutr. Biochem.* 22: 38-45.
- SWISS-PROT/TrEMBL (Q5T1N1). World Wide Web URL: <http://www.uniprot.org/uniprot/Q5T1N1>

## CHROMOSOMAL LOCATION

Genetic locus: AKNAD1 (human) mapping to 1p13.3; Aknad1 (mouse) mapping to 3 F3.

## SOURCE

AKNAD1 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AKNAD1 of human origin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## 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-240112 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AKNAD1 (S-12) is recommended for detection of AKNAD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 AKNAD1 siRNA (h): sc-88558, AKNAD1 siRNA (m): sc-140003, AKNAD1 shRNA Plasmid (h): sc-88558-SH, AKNAD1 shRNA Plasmid (m): sc-140003-SH, AKNAD1 shRNA (h) Lentiviral Particles: sc-88558-V and AKNAD1 shRNA (m) Lentiviral Particles: sc-140003-V.

Molecular Weight of AKNAD1: 93 kDa.

## 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) 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.

## RESEARCH USE

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