

# KLHDC4 (T-14): sc-137550

## BACKGROUND

KLHDC4 (kelch domain-containing protein 4) is a 520 amino acid protein that contains 6 kelch repeats and exists as 3 alternatively spliced isoforms. The gene encoding KLHDC4 maps to human chromosome 16q24.2 and mouse chromosome 8 E1. Chromosome 16 encodes over 900 genes in approximately 90 million base pairs, makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, through the CREBBP gene which encodes a critical CREB binding protein. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene.

## REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. *Clin. Genet.* 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. *Am. J. Hum. Genet.* 52: 249-254.
3. Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
4. Adams, J., et al. 2000. The kelch repeat superfamily of proteins: propellers of cell function. *Trends Cell Biol.* 10: 17-24.
5. Kuhlensbaumer, G., et al. 2002. Giant axonal neuropathy (GAN): case report and two novel mutations in the gigaxonin gene. *Neurology* 58: 1273-1276.
6. Cho, J.H. 2004. Advances in the genetics of inflammatory bowel disease. *Curr. Gastroenterol. Rep.* 6: 467-473.

## CHROMOSOMAL LOCATION

Genetic locus: KLHDC4 (human) mapping to 16q24.2; Klhdc4 (mouse) mapping to 8 E1.

## SOURCE

KLHDC4 (T-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of KLHDC4 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-137550 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.

## APPLICATIONS

KLHDC4 (T-14) is recommended for detection of KLHDC4 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 KLHDC family members.

KLHDC4 (T-14) is also recommended for detection of KLHDC4 in additional species, including equine and bovine.

Suitable for use as control antibody for KLHDC4 siRNA (h): sc-92996, KLHDC4 siRNA (m): sc-146503, KLHDC4 shRNA Plasmid (h): sc-92996-SH, KLHDC4 shRNA Plasmid (m): sc-146503-SH, KLHDC4 shRNA (h) Lentiviral Particles: sc-92996-V and KLHDC4 shRNA (m) Lentiviral Particles: sc-146503-V.

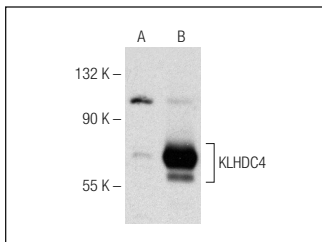
Molecular Weight of KLHDC4 isoforms: 58/52/54 kDa.

Positive Controls: KLHDC4 (h): 293T Lysate: sc-114032.

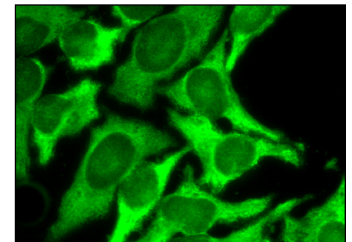
## RECOMMENDED SECONDARY REAGENTS

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



KLHDC4 (T-14): sc-137550. Western blot analysis of KLHDC4 expression in non-transfected: sc-117752 (A) and human KLHDC4 transfected: sc-114032 (B) 293T whole cell lysates.



KLHDC4 (T-14): sc-137550. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## RESEARCH USE

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

## PROTOCOLS

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