

# MORN4 (T-14): sc-240693

## BACKGROUND

MORN4 (MORN repeat containing 4), also known as protein 44050 or retinophilin, is a 146 amino acid protein that contains 4 MORN repeats and exists as 2 alternatively spliced isoforms. The gene encoding MORN4 maps to human chromosome 10, which contains over 800 genes and 135 million nucleotides, making up nearly 4.5% of the human genome. PTEN is an important tumor suppressor gene located on chromosome 10 and, when defective, causes a genetic predisposition to cancer development known as Cowden syndrome. The chromosome 10 encoded gene ERCC6 is important for DNA repair and is linked to Cockayne syndrome which is characterized by extreme photosensitivity and premature aging. Tetrahydrobiopterin deficiency and a number of syndromes involving defective skull and facial bone fusion are also linked to chromosome 10. As with most trisomies, trisomy 10 is rare and is deleterious.

## REFERENCES

1. Troelstra, C., et al. 1992. Localization of the nucleotide excision repair gene ERCC6 to human chromosome 10q11-q21. *Genomics* 12: 745-749.
2. Jabs, E.W., et al. 1994. Jackson-Weiss and Crouzon syndromes are allelic with mutations in fibroblast growth factor receptor 2. *Nat. Genet.* 8: 275-279.
3. Berger, P., et al. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. *Neurogenetics* 4: 1-15.
4. Teresi, R.E., et al. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
5. Mecklenburg, K.L. 2007. *Drosophila* retinophilin contains MORN repeats and is conserved in humans. *Mol. Genet. Genomics* 277: 481-489.
6. Cho, M.Y., et al. 2008. First report of ovarian dysgerminoma in Cowden syndrome with germline PTEN mutation and PTEN-related 10q loss of tumor heterozygosity. *Am. J. Surg. Pathol.* 32: 1258-1264.

## CHROMOSOMAL LOCATION

Genetic locus: MORN4 (human) mapping to 10q24.2; Morn4 (mouse) mapping to 19 C3.

## SOURCE

MORN4 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MORN4 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-240693 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

MORN4 (T-14) is recommended for detection of MORN4 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other MORN family members.

MORN4 (T-14) is also recommended for detection of MORN4 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MORN4 siRNA (h): sc-90642, MORN4 siRNA (m): sc-149508, MORN4 shRNA Plasmid (h): sc-90642-SH, MORN4 shRNA Plasmid (m): sc-149508-SH, MORN4 shRNA (h) Lentiviral Particles: sc-90642-V and MORN4 shRNA (m) Lentiviral Particles: sc-149508-V.

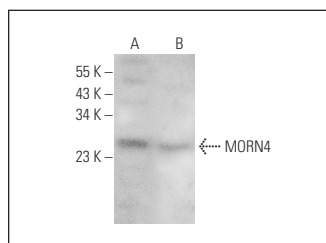
Molecular Weight of MORN4 isoforms: 16/23 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or JAR cell lysate: sc-2276.

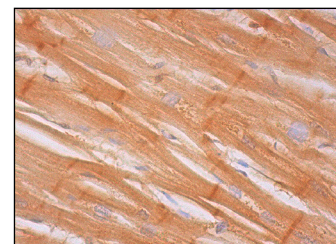
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



MORN4 (T-14): sc-240693. Western blot analysis of MORN4 expression in JAR (A) and Hep G2 (B) whole cell lysates.



MORN4 (T-14): sc-240693. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and intercalated disc staining of myocytes.

## STORAGE

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