

# HEATR2 (Q-16): sc-160429

## BACKGROUND

HEATR2 (HEAT repeat containing 2) is an 855 amino acid protein that exists as 3 alternatively spliced isoforms and contains 10 HEAT (huntingtin, elongation factor 3 (EF3), protein phosphatase 2A (PP2A) and the yeast PI 3-kinase Tor1) repeats. HEAT repeats form rod-like helical structures that are involved in intracellular transport. HEATR2 is encoded by a gene located on human chromosome 7p22.3. Human chromosome 7 houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to Osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

## REFERENCES

1. Tsipouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro  $\alpha$  2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
2. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. *Proc. Natl. Acad. Sci. USA* 95: 3781-3785.
3. Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. *Nature* 424: 157-164.
4. Eckert, M.A., et al. 2006. The neurobiology of Williams syndrome: cascading influences of visual system impairment? *Cell. Mol. Life Sci.* 63: 1867-1875.
5. Osborne, L.R., et al. 2006. Williams-Beuren syndrome diagnosis using fluorescence *in situ* hybridization. *Methods Mol. Med.* 126: 113-128.
6. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.
7. Shimamura, A. 2006. Shwachman-Diamond syndrome. *Semin. Hematol.* 43: 178-188.
8. Brezinová, J., et al. 2007. Structural aberrations of chromosome 7 revealed by a combination of molecular cytogenetic techniques in myeloid malignancies. *Cancer Genet. Cytogenet.* 173: 10-16.

## CHROMOSOMAL LOCATION

Genetic locus: HEATR2 (human) mapping to 7p22.3; Heatr2 (mouse) mapping to 5 G2.

## SOURCE

HEATR2 (Q-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HEATR2 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.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160429 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

HEATR2 (Q-16) is recommended for detection of HEATR2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); non cross-reactive with other HEATR family members.

HEATR2 (Q-16) is also recommended for detection of HEATR2 in additional species, including canine and porcine.

Suitable for use as control antibody for HEATR2 siRNA (h): sc-89832, HEATR2 siRNA (m): sc-145921, HEATR2 shRNA Plasmid (h): sc-89832-SH, HEATR2 shRNA Plasmid (m): sc-145921-SH, HEATR2 shRNA (h) Lentiviral Particles: sc-89832-V and HEATR2 shRNA (m) Lentiviral Particles: sc-145921-V.

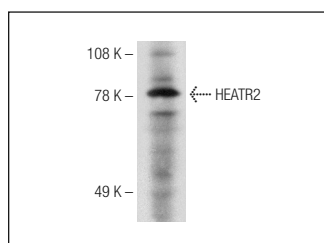
Molecular Weight of HEATR2: 93 kDa.

Positive Controls: K-562 cell lysate: sc-2203.

## 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



HEATR2 (Q-16): sc-160429. Western blot analysis of HEATR2 expression in K-562 whole cell lysate.

## RESEARCH USE

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