

# DOC4 (H-50): sc-134883

## BACKGROUND

DOC4 is a mammalian ortholog of a *Drosophila* gene, Tenm/Odz, which is implicated in the patterning of the early fly embryo. DOC4, for downstream of CHOP, is induced in response to stress and participates in CHOP/GADD153 signaling pathway. DOC4 is a secreted protein that is expressed at high levels in certain cell types, while CHOP is a small nuclear protein that dimerizes avidly with members of the C/EBP family of transcription factor and is also induced in response to stress. The N-terminus peptide sequence of DOC4 is identical to a novel portion of heregulin, which is in fact formed from a rare gene chromosomal translocation event between DOC4 and the heregulin gene HGL. DOC4 (also designated Odz4) and several other mammalian homologs of *Drosophila* Tenm/Odz, mouse Odz3 and Odz2, all contain a putative signal peptide, eight EGF-like repeats, and a putative transmembrane domain followed by a 1,800 amino acid stretch having unique sequence patterns from other proteins outside this family. The mouse genes Odz3 and DOC4/Odz4 exhibit partially overlapping, but clearly distinct, embryonic expression patterns, and Odz2 is predominantly expressed in the nervous system.

## REFERENCES

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6. Ben-Zur, T., Feige, E., Motro, B. and Wides, R. 2000. The mammalian Odz gene family: homologs of a *Drosophila* pair-rule gene with expression implying distinct yet overlapping developmental roles. *Dev. Biol.* 217: 107-120.

## CHROMOSOMAL LOCATION

Genetic locus: ODZ4 (human) mapping 11q14.1; Odz4 (mouse) mapping to 7 E1.

## SOURCE

DOC4 (H-50) is a rabbit polyclonal antibody raised against amino acids 2515-2564 mapping within a C-terminal extracellular domain of DOC4 of human origin.

## PRODUCT

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

## APPLICATIONS

DOC4 (H-50) is recommended for detection of DOC4 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).

DOC4 (H-50) is also recommended for detection of DOC4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DOC4 siRNA (h): sc-40494, DOC4 siRNA (m): sc-40495, DOC4 shRNA Plasmid (h): sc-40494-SH, DOC4 shRNA Plasmid (m): sc-40495-SH, DOC4 shRNA (h) Lentiviral Particles: sc-40494-V and DOC4 shRNA (m) Lentiviral Particles: sc-40495-V.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## STORAGE

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

## 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.