

REV1 (N-19): sc-13826

BACKGROUND

Originally identified in *Saccharomyces cerevisiae*, Rev1p exhibits deoxycytidyl transferase activity and is required for translesion replication and mutagenesis induced by a wide variety of DNA-damaging events. The human homolog REV1, like its yeast Rev1p counterpart, is also involved in translesion replication and spontaneous mutagenesis. The human REV1 gene maps between the chromosomal loci 2q11.1 and 2q11.2 and is ubiquitously expressed in various human tissues. Human REV1 protein is a dCMP transferase that specifically inserts a dCMP residue opposite either a DNA template guanine, a DNA template apurinic/apyridinic site or a uracil residue. REV1 transferase may play a critical role during mutagenic translesion DNA synthesis by bypassing a template adenosine/guanine site in human cells.

REFERENCES

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- Baynton, K., et al. 1999. Distinct roles for Rev1p during translesion synthesis in *Saccharomyces cerevisiae*. *Mol. Microbiol.* 34: 124-133.
- Lin, W., et al. 1999. The human REV1 gene codes for a DNA template-dependent dCMP transferase. *Nucleic Acids Res.* 27: 4468-4475.
- Nelson, J.R., et al. 2000. Evidence for a second function for *Saccharomyces cerevisiae* Rev1p. *Mol. Microbiol.* 37: 549-554.
- Gibbs, P.E., et al. 2000. The function of the human homolog of *Saccharomyces cerevisiae* REV1 is required for mutagenesis induced by UV light. *Proc. Natl. Acad. Sci. USA* 97: 4186-4191.
- Lawrence, C.W., et al. 2001. Mutagenesis in eukaryotes dependent on DNA polymerase and Rev1p. *Philos. Trans. R. Soc. Lond., B., Biol. Sci.* 356: 41-46.

CHROMOSOMAL LOCATION

Genetic locus: REV1 (human) mapping to 2q11.2; Rev1 (mouse) mapping to 1 B.

SOURCE

REV1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of REV1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13826 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13826 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

REV1 (N-19) is recommended for detection of REV1 of human and, to a lesser extent, mouse and rat 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).

REV1 (N-19) is also recommended for detection of REV1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for REV1 siRNA (h): sc-38232, REV1 siRNA (m): sc-38233, REV1 shRNA Plasmid (h): sc-38232-SH, REV1 shRNA Plasmid (m): sc-38233-SH, REV1 shRNA (h) Lentiviral Particles: sc-38232-V and REV1 shRNA (m) Lentiviral Particles: sc-38233-V.

REV1 (N-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of REV1: 138 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

SELECT PRODUCT CITATIONS

- Okuda, T., et al. 2005. Suppression of hREV1 expression reduces the rate at which human ovarian carcinoma cells acquire resistance to cisplatin. *Mol. Pharmacol.* 67: 1852-1860.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **REV1 (A-11): sc-393022**, our highly recommended monoclonal alternative to REV1 (N-19).