SANTA CRUZ BIOTECHNOLOGY, INC.

REV1 (H-300): sc-48806

BACKGROUND

Originally identified in *Saccaromyces 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.

CHROMOSOMAL LOCATION

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

SOURCE

REV1 (H-300) is a rabbit polyclonal antibody raised against amino acids 81-380 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-48806 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

REV1 (H-300) is recommended for detection of REV1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

REV1 (H-300) is also recommended for detection of REV1 in additional species, including equine and canine.

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 (H-300) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

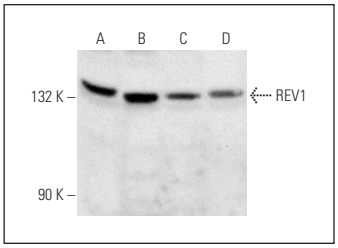
Molecular Weight of REV1: 138 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or A-431 nuclear extract: sc-2122.

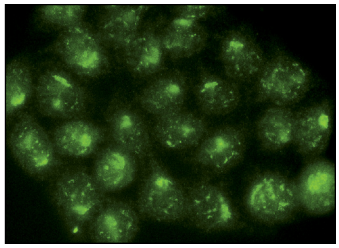
RECOMMENDED SECONDARY REAGENTS

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



REV1 (H-300): sc-48806. Western blot analysis of REV1 expression in HeLa (**A**), Jurkat (**B**), A-431 (**C**) and HL-60 (**D**) nuclear extracts.



REV1 (H-300): sc-48806. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Xie, J., et al. 2010. Targeting the FANCJ-BRCA1 interaction promotes a switch from recombination to poleta-dependent bypass. Oncogene 29: 2499-2508.
2. Takezawa, J., et al. 2010. Rev1, Rev3, or Rev7 siRNA abolishes ultraviolet light-induced translesion replication in HeLa cells: A comprehensive study using alkaline sucrose density gradient sedimentation. J. Nucleic Acids 2010: 750296.
3. Hicks, J.K., et al. 2010. Differential roles for DNA polymerases η, ζ, and REV1 in lesion bypass of intrastrand versus interstrand DNA cross-links. Mol. Cell. Biol. 30: 1217-1230.
4. Chun, A.C., et al. 2013. REV7 is required for anaphase-promoting complex-dependent ubiquitination and degradation of translesion DNA polymerase REV1. Cell Cycle 12: 365-378.

RESEARCH USE

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