SANTA CRUZ BIOTECHNOLOGY, INC.

ERCC1 (FL-297): sc-10785

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Xeroderma pigmentosum (XP) is an autosomal recessive disorder characterized by a genetic predisposition to sunlight-induced skin cancer; it is commonly due to deficiencies in DNA repair enzymes. The most frequent mutations are found in the XP genes from group A through G and group V, which encode for nucleotide excision repair proteins. XPF, which is also designated ERCC4 or ERCC11, is a protein that associates directly with the excision repair cross-complementing 1 (ERCC1) factor. ERCC1, a functional homolog of Rad10 in *S. cerevisiae*, is a component of a structure-specific endonuclease that is responsible for 5' incisions during DNA repair. The ERCC1-XPF endo-nuclease preferentially cleaves one strand of DNA between duplex and single-stranded regions near borders of the stem-loop structure and, thereby, contributes to the initial steps of the nucleotide excision repair process.

CHROMOSOMAL LOCATION

Genetic locus: ERCC1 (human) mapping to 19q13.32; Ercc1 (mouse) mapping to 7 A3.

SOURCE

ERCC1 (FL-297) is a rabbit polyclonal antibody raised against amino acids 1-297 representing full length ERCC1 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-10785 X, 200 µg/0.1 ml.

APPLICATIONS

ERCC1 (FL-297) is recommended for detection of ERCC1 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).

Suitable for use as control antibody for ERCC1 siRNA (h2): sc-270369, ERCC1 siRNA (m): sc-35332, ERCC1 shRNA Plasmid (h2): sc-270369-SH, ERCC1 shRNA Plasmid (m): sc-35332-SH, ERCC1 shRNA (h2) Lentiviral Particles: sc-270369-V and ERCC1 shRNA (m) Lentiviral Particles: sc-35332-V.

ERCC1 (FL-297) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ERCC1: 38 kDa.

Positive Controls: ERCC1 (h): 293T Lysate: sc-116554, ERCC1 (m): 293T Lysate: sc-126803 or SK-BR-3 cell lysate: sc-2218.

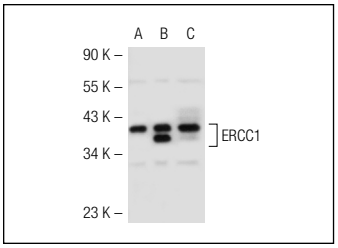
STORAGE

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

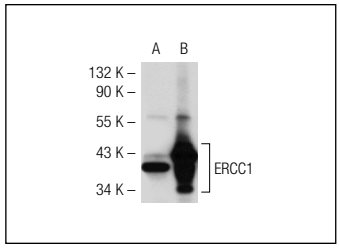
RESEARCH USE

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

DATA



ERCC1 (FL-297): sc-10785. Western blot analysis of ERCC1 expression in non-transfected 293T: sc-117752 (**A**), mouse ERCC1 transfected 293T: sc-126803 (**B**) and SK-BR-3 (**C**) whole cell lysates.



ERCC1 (FL-297): sc-10785. Western blot analysis of ERCC1 expression in non-transfected: sc-117752 (**A**) and human ERCC1 transfected: sc-116554 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Spiro, C., et al. 2003. Nuclease-deficient FEN-1 blocks Rad51/BRCA1-mediated repair and causes trinucleotide repeat instability. Mol. Cell. Biol. 23: 6063-6074.
2. Sabatino, M.A., et al. 2010. Down-regulation of the nucleotide excision repair gene XPG as a new mechanism of drug resistance in human and murine cancer cells. Mol. Cancer 9: 259.
3. Tsai, M.S., et al. 2011. Synergistic effect of curcumin and cisplatin via down-regulation of thymidine phosphorylase and excision repair cross-complementary 1 (ERCC1). Mol. Pharmacol. 80: 136-146.
4. Ko, J.C., et al. 2011. Modulation of Rad51, ERCC1, and thymidine phosphorylase by emodin result in synergistic cytotoxic effect in combination with capecitabine. Biochem. Pharmacol. 81: 680-690.
5. Kang, H.J., et al. 2011. Detoxification: a novel function of BRCA1 in tumor suppression? Toxicol. Sci. 122: 26-37. Arbogast, S., et al. 2011. Automated ERCC1 immunohistochemistry in non-small cell lung cancer: comparison of anti-ERCC1 antibodies 8F1, D-10, and FL-297. Appl. Immunohistochem. Mol. Morphol. 19: 99-105.
6. Gao, R., et al. 2011. The ERCC1 N118N polymorphism does not change cellular ERCC1 protein expression or platinum sensitivity. Mutat. Res. 708: 21-27.
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8. Kawashima, A., et al. 2011. Excision repair cross-complementing group 1 may predict the efficacy of chemoradiation therapy for muscle-invasive bladder cancer. Clin. Cancer Res. 17: 2561-2569.
9. Stoepker, C., et al. 2011. SLX4, a coordinator of structure-specific endonucleases, is mutated in a new Fanconi anemia subtype. Nat. Genet. 43: 138-141.