SANTA CRUZ BIOTECHNOLOGY, INC.

ERCC1 (D-16): sc-10157

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 115 kDa 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 endonuclease 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.

REFERENCES

1. van Duin, M., et al. 1986. Molecular characterization of the human excision repair gene ERCC1: cDNA cloning and amino acid homology with the yeast DNA repair gene Rad10. Cell 44: 913-923.
2. Tateishi, S., et al. 1995. Separation of protein factors that correct the defects in the seven complementation groups of xeroderma pigmentosum cells. J. Biochem. 118: 819-824.
3. Aboussekhra, A., et al. 1995. Mammalian DNA nucleotide excision repair reconstituted with purified protein components. Cell 80: 859-868.
4. Li, L., et al. 1995. Mutations in XPA that prevent association with ERCC1 are defective in nucleotide excision repair. Mol. Cell. Biol. 15: 1993-1998.
5. Sijbers, A.M., et al. 1996. Xeroderma pigmentosum group F caused by a defect in a structure-specific DNA repair endonuclease. Cell 86: 811-822.

CHROMOSOMAL LOCATION

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

SOURCE

ERCC1 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ERCC1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10157 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-10157 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

ERCC1 (D-16) is recommended for detection of ERCC1 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

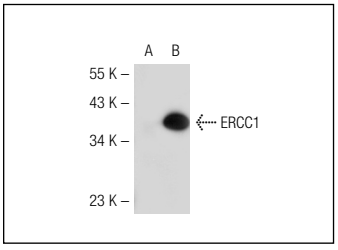
Suitable for use as control antibody for ERCC1 siRNA (m): sc-35332, ERCC1 shRNA Plasmid (m): sc-35332-SH and ERCC1 shRNA (m) Lentiviral Particles: sc-35332-V.

ERCC1 (D-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

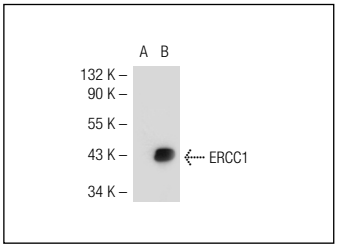
Molecular Weight of ERCC1: 38 kDa.

Positive Controls: 3611-RF nuclear extract: sc-2143.

DATA



ERCC1 (D-16): sc-10157. Western blot analysis of ERCC1 expression in non-transfected: sc-117752 (**A**) and mouse ERCC1 transfected: sc-126803 (**B**) 293T whole cell lysates.



ERCC1 (D-16): sc-10157. 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. Lawrence, N.J., et al. 2009. Topical thymidine dinucleotide application protects against UVB-induced skin cancer in mice with DNA repair gene (Ercc1)-deficient skin. DNA Repair 8: 664-671.

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.