

ERCC1 (DNA excision repair protein). Rabbit Antigen Immunoaffinity Purified Polyclonal Excision Repair Cross Complementing protein-1; Nucleotide Excision Repair Protein

#### BACKGROUND

Recognizes a protein of 33-36kDa, identified as the Excision Repair Cross Complementing (ERCC1). The mammalian ERCC1-encoded polypeptide is required for nucleotide excision repair (NER) of damaged DNA and is homologous to Saccharomyces cerevisiae RAD10, which functions in repair and mitotic intrachromosomal recombination. The structure-specific ERCC1/XPF endonuclease complex is implicated in the repair of two distinct types of lesions in DNA: NER for UV-induced lesions and bulky chemical adducts; and recombination repair of the very genotoxic interstrand cross-links. NER mechanism involves dual incisions on both sides of the damage catalyzed by two nucleases. In mammalian cells XPG cleaves 3' of the DNA lesion while the ERCC1-XPF complex makes the 5' incision. Elevated levels of ERCC1 have also been reported in Cisplatin-resistant cells. ORDERING INFORMATION CATALOG NUMBER X2734P SIZE 100 µg FORM Affinity Purified HOST/CLONE Rabbit FORMULATION Provided as solution in phosphate buffered saline with 0.08% sodium azide CONCENTRATION

See vial for concentration

ISOTYPE Ig

APPLICATIONS Western Blot, Immunohistochemistry (paraffin-embedded)

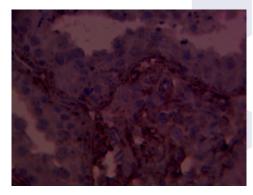
SPECIES REACTIVITY Human

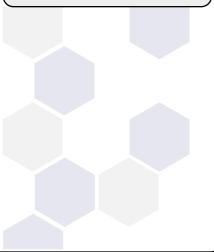
ACCESSION NUMBER

Human P07992

IMMUNOGEN Synthetic peptide derived from human ERCC1 protein

Immunohistochemical staining of normal human testis tissue using ERCC1 antibody (Cat. No. X2734P) at 10  $\mu$ g/ml and detected using anti-Rabbit HRP secondary antibody and visualized using DAB substrate and hematoxylin counterstain.





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For research use only. Not for use in human diagnostics or therapeutics.

Exalpha Biologicals, Inc. 2 Shaker Road, Bldg. B101 Shirley, MA 01464 Tel: 800.395.1137 Fax: 866.924.5100 www.exalpha.com info@exalpha.com Page 1 of 2 Cat. No. X2734P

# POSITIVE CONTROL/TISSUE EXPRESSION

A431 or HeLa lysates, human tonsil tissue

## COMMENTS

This antibody can be used for Western blotting (5-10  $\mu$ g/ml) and immunohistochemistry on formalin/paraffin sections (5-10  $\mu$ g/ml). Optimal concentration should be evaluated by serial dilutions. **PURIFICATION** 

Antigen Immunoaffinity Purification

## SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

## STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

#### REFERENCES

**1.** Hayashi T, et al: ERCC1 mutations in UV-sensitive Chinese hamster ovary (CHO) cell lines. Mutat Res 1998;407 (3):269-276.

**2.** de Laat WL, et al: DNA structural elements required for ERCC1-XPF endonuclease activity. J Biol Chem 1998;273 (14):7835-7842.

**3.** de Laat WL, et al: Mapping of interaction domains between human repair proteins ERCC1 and XPF. Nucleic Acids Res 1998 Sep 15;26(18):4146-4152.

**4.** Lee-Kwon W, et al: Involvement of the Ras/extracellular signal-regulated kinase signalling pathway in the regulation of ERCC-1 mRNA levels by insulin. Biochem J 1998 Apr 15;331 (Pt 2):591-597.

**5.** Lee-Kwon W, et al: Nucleotide excision repair is not required for the antiapoptotic function of insulin-like growth factor 1. Exp Cell Res 1998;241(2):458-466.

6. Li Q, Bostick-Bruton F, Reed E: Effect of interleukin-1 alpha and tumour necrosis factor- alpha on cisplatin-induced ERCC-1 mRNA expression in a human ovarian carcinoma cell line. Anticancer Res 1998;18(4A):2283-2287.

7. Li Q, Ding L, Yu JJ, Mu C, Tsang B, Bostick- Bruton F, Reed E: Cisplatin and phorbol ester independently induce ERCC-1 protein in human ovarian carcinoma cells. Int J Oncol 1998;13(5):987-992.

8. Lin YW, Kubota M, Koishi S, Sawada M, Usami I, Watanabe K, Akiyama Y: Analysis of mutations at the DNA repair genes in acute childhood leukaemia. Br J Haematol 1998;13(4):357-365.

9. Reed E: Platinum-DNA adduct, nucleotide excision repair and platinum based anti-cancer chemotherapy. Cancer Treat Rev 1998;24(5):331-344.

10. Rolig RL, Lowery MP, Adair GM, Nairn RS: Characterization and analysis of Chinese hamster ovary cell ERCC1 mutant alleles. Mutagenesis 1998;13(4):357-365.

11. Li Q, Tsang B, Bostick-Bruton F, Reed E: Modulation of excision repair cross complementation group 1 (ERCC-1) mRNA expression by pharmacological agents in human ovarian carcinoma cells. Biochem Pharmacol 1999;57(4):347 -353.

12. Miura M, et al. Exp Cell Res 1996;226:126-132.

#### **PRODUCT SPECIFIC REFERENCES**