

ERCC1 (8F1): sc-56673

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, associates directly with the excision repair cross-complementing 1 (ERCC1) factor. ERCC-1, 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.

CHROMOSOMAL LOCATION

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

SOURCE

ERCC1 (8F1) is a mouse monoclonal antibody raised against full length ERCC1 of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2b} in 0.5 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ERCC1 (8F1) 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), immunohistochemistry (including paraffin-embedded sections) (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.

Molecular Weight of ERCC1: 38 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, SK-BR-3 nuclear extract: sc-2134 or ERCC1 (h): 293T lysate: sc-116554.

STORAGE

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

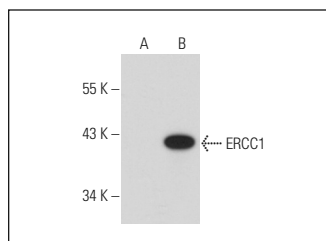
PROTOCOLS

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

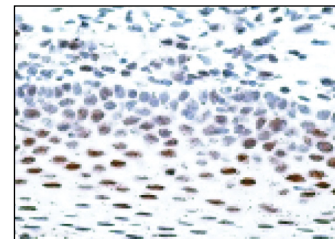
RESEARCH USE

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

DATA



ERCC1 (8F1): sc-56673. Western blot analysis of ERCC1 expression in non-transfected: sc-117752 (A) and human ERCC1 transfected: sc-116554 (B) 293T whole cell lysates.



ERCC1 (8F1): sc-56673. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

- Seiwert, T.Y., et al. 2009. The MET receptor tyrosine kinase is a potential novel therapeutic target for head and neck squamous cell carcinoma. *Cancer Res.* 69: 3021-3031.
- Zucali, P.A., et al. 2011. Thymidylate synthase and excision repair cross-complementing group-1 as predictors of responsiveness in mesothelioma patients treated with pemetrexed/carboplatin. *Clin. Cancer Res.* 17: 2581-2590.
- Seiwert, T.Y., et al. 2014. DNA repair biomarkers XPF and phospho-MAPKAP kinase 2 correlate with clinical outcome in advanced head and neck cancer. *PLoS ONE* 9: e102112.
- Yang, C.C., et al. 2016. Up-regulation of HB-EGF by the Cox-2/PGE2 signaling associates with the cisplatin resistance and tumor recurrence of advanced HNSCC. *Oral Oncol.* 56: 54-61.
- Ganapathy, V., et al. 2017. Electronic cigarette aerosols suppress cellular antioxidant defenses and induce significant oxidative DNA damage. *PLoS ONE* 12: e0177780.
- Stramucci, L., et al. 2019. MKK3 sustains cell proliferation and survival through p38DELTA MAPK activation in colorectal cancer. *Cell Death Dis.* 10: 842.
- Wang, M., et al. 2020. Transcription factor ZNF326 upregulates the expression of ERCC1 and HDAC7 and its clinicopathologic significance in glioma. *Lab. Med.* 51: 377-384.
- Oh, K.S., et al. 2022. A synthetic lethal strategy using PARP and ATM inhibition for overcoming trastuzumab resistance in HER2-positive cancers. *Oncogene* 41: 3939-3952.

CONJUGATES

See **ERCC1 (D-10): sc-17809** for ERCC1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.