SANTA CRUZ BIOTECHNOLOGY, INC.

XPF (26): sc-136401

BACKGROUND

Xeroderma pigmentosum (XP) is an autosomal recessive disorder characterized by a genetic predisposition to sunlight-induced skin cancer, and 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 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. 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.
3. 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.
4. Aboussekhra, A., et al. 1995. Mammalian DNA nucleotide excision repair reconstituted with purified protein components. Cell 80: 859-868.
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.
6. Wakasugi, M., et al. 1999. Order of assembly of human DNA repair excision nuclease. J. Biol. Chem. 274: 18759-18768.
7. Houtsmuller, A.B., et al. 1999. Action of DNA repair endonuclease ERCC1/XPF in living cells. Science 284: 958-961.

CHROMOSOMAL LOCATION

Genetic locus: ERCC4 (human) mapping to 16p13.12.

SOURCE

XPF (26) is a mouse monoclonal antibody raised against amino acids 313-433 of XPF of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

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. Not for resale.

APPLICATIONS

XPF (26) is recommended for detection of XPF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for XPF siRNA (h): sc-36855, XPF shRNA Plasmid (h): sc-36855-SH and XPF shRNA (h) Lentiviral Particles: sc-36855-V.

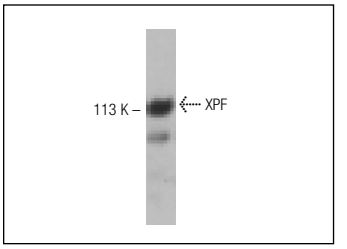
Molecular Weight of XPF: 112 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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.

DATA



XPF (26): sc-136401. Western blot analysis of XPF expression in HeLa whole cell lysate.

PROTOCOLS

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