

# XPF (3F2/3): sc-136153

## 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, thereby contributing to the initial steps of the nucleotide excision repair process.

## CHROMOSOMAL LOCATION

Genetic locus: ERCC4 (human) mapping to 16p13.12; Ercc4 (mouse) mapping to 16 A1.

## SOURCE

XPF (3F2/3) is a mouse monoclonal antibody raised against His-tagged recombinant protein corresponding to amino acids 629-905 of XPF of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

XPF (3F2/3) is available conjugated to agarose (sc-136153 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136153 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136153 PE), fluorescein (sc-136153 FITC), Alexa Fluor<sup>®</sup> 488 (sc-136153 AF488), Alexa Fluor<sup>®</sup> 546 (sc-136153 AF546), Alexa Fluor<sup>®</sup> 594 (sc-136153 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-136153 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-136153 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-136153 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

XPF (3F2/3) is recommended for detection of XPF 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for XPF siRNA (h): sc-36855, XPF siRNA (m): sc-36856, XPF shRNA Plasmid (h): sc-36855-SH, XPF shRNA Plasmid (m): sc-36856-SH, XPF shRNA (h) Lentiviral Particles: sc-36855-V and XPF shRNA (m) Lentiviral Particles: sc-36856-V.

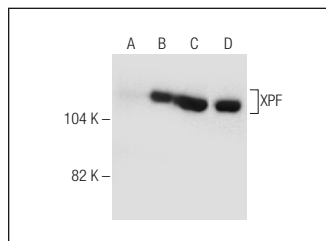
Molecular Weight of XPF: 112 kDa.

Positive Controls: XPF (h): 293 Lysate: sc-171209, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

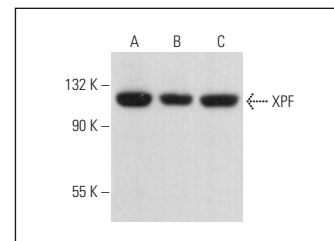
## STORAGE

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

## DATA



XPF (3F2/3): sc-136153. Western blot analysis of XPF expression in non-transfected: sc-110760 (A) and human XPF transfected: sc-171209 (B) 293 whole cell lysates and HeLa (C) and MCF7 (D) nuclear extracts.



XPF (3F2/3): sc-136153. Western blot analysis of XPF expression in HeLa (A), K-562 (B) and IB4 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- van Cuijk, L., et al. 2015. SUMO and ubiquitin-dependent XPC exchange drives nucleotide excision repair. *Nat. Commun.* 6: 7499.
- Zhang, Q., et al. 2016. Higher expression of XPF is a critical factor in intrinsic chemotherapy resistance of human renal cell carcinoma. *Int. J. Cancer* 139: 2827-2837.
- Reynolds, J.J., et al. 2017. Mutations in DONSON disrupt replication fork stability and cause microcephalic dwarfism. *Nat. Genet.* 49: 537-549.
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- Sabatella, M., et al. 2020. ERCC1-XPF targeting to psoralen-DNA crosslinks depends on XPA and FANCD2. *Cell. Mol. Life Sci.* 77: 2005-2016.
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- van Toorn, M., et al. 2022. Active DNA damage eviction by HLF stimulates nucleotide excision repair. *Mol. Cell* 82: 1343-1358.e8.
- Moretton, A., et al. 2022. Clickable cisplatin derivatives as versatile tools to probe the DNA damage response to chemotherapy. *Front. Oncol.* 12: 874201.
- Payliss, B.J., et al. 2022. Phosphorylation of the DNA repair scaffold SLX4 drives folding of the SAP domain and activation of the MUS81-EME1 endonuclease. *Cell Rep.* 41: 111537.

## RESEARCH USE

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