

MONOCLONAL ANTIBODY

For research use only. Not for clinical diagnosis.

Catalog No. BAM-70-031-EX

Anti-XPA (Clone 5F12)

BACKGROUND

XP (Xeroderma pigmentosum) is an autosomal recessive human disease characterized by hypersensitivity to sunlight and a high incidence of skin cancer on sun-exposed skin (1). Cells from XP patients are hypersensitive to killing by UV irradiation because of a defect in nucleotide excision repair (NER). XP is classified into seven complementation groups (A-G) and a variant form (1). XPA shows the most severe symptoms. Products encoded by the XP genes function in repairing UV-induced cyclobutane pyrimidine dimer and (6-4) photoproducts as well as chemically induced variety of DNA lesions (1).

XPA protein consists of 273 amino acids and forms a complex with many proteins such as RPA, ERCC1, TFIIH, XAB1, and XAB2, which plays a role in early step of NER. The hybridoma 5F12 was constructed by Prof. K. Tanaka's group who first cloned the XPA gene (2, 3).

Product type	Primary antibodies
Host	Mouse
Source	
Form	Liquid
	Purified IgG, 1 mg/ml in PBS pH 7.2, 50% glycerol, filter-sterilized
	Epitope: Amino acids 30-47
Volume	50 µg
Concentration	
Specificity	
Antigen	Recombinant full-length human XPA protein
Clone	5F12
Isotype	IgG2b

Application notes WB, ELISA, Inhibition of in vitro excision repair reaction, Inhibition of XPA interaction with ERCC1 and TFIIH Other applications have not been tested.

Recommended use

Recommended dilutions

Western blotting: 0.1-1 µg/ml

Optimal dilutions/concentrations should be determined by the end user.

Data Link: UniProtKB/Swiss-Prot [P23025](#) (XPA_HUMAN)

Staining Pattern

Cross reactivity human (expected to react also with mouse XPA from the sequence homology)

Storage -20°C (for long period; -70°C)

References

(This antibody is described in Ref. 2)

- 1) Friedberg EC *et al* *DNA Repair and Mutagenesis* 2nd ed., ASM Press (2006)
- 2) Saijo M *et al* "Inhibition of nucleotide excision repair by anti-XPA monoclonal antibodies which interfere with binding to RPA, ERCC1, and TFIIH" *Biochem Biophys Res Comm* **321**:815-822 (2004) PMID: [15358100](#)
- 3) Tanaka K *et al* "Analysis of a human DNA excision repair gene involved in group A xeroderma pigmentosum and containing a zinc-finger domain" *Nature* **348**:73 -76 (1990) PMID: [2234061](#)

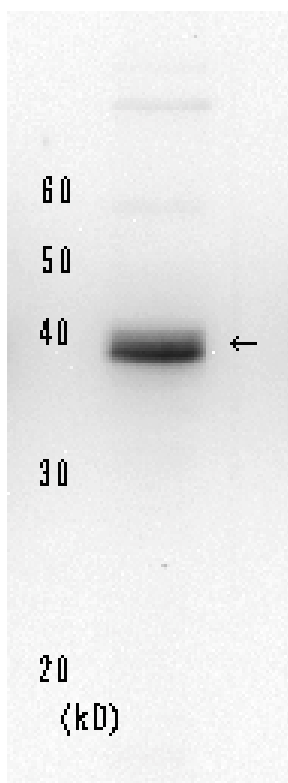


Figure Detection of XPA protein in the crude extract of HeLa cells by Western blotting using this monoclonal antibody.

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