



## Anti-XPA

### 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 play a role in early step of NER. The hybridoma 5F12 was constructed by Pro. K. Tanaka's group who first cloned the XPA gene (2, 3).

<b>Product type</b>	Primary antibodies
<b>Host</b>	Mouse
<b>Source</b>	Ascites
<b>Form</b>	Liquid
	Purified IgG, 1 mg/ml in PBS pH 7.2, 50% glycerol
<b>Volume</b>	250 µg
<b>Concentration</b>	1 mg/ml
<b>Specificity</b>	human XPA protein
<b>Antigen</b>	Recombinant full-length human XPA protein
<b>Clone</b>	5F12
<b>Isotype</b>	IgG2b

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

### Recommended use

### Recommended dilutions

Western blotting: 0.1~1 µg/ml

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

### Staining Pattern

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

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

**References** 1) Friedberg EC et al., DNA Repair and Mutagenesis. 2nd Ed. ASM Press (2006)

2) Saijo M et al., Biochem Biophys Res Comm 321:815 (2004)

3) Tanaka K et al., Nature 348:73 (1990)

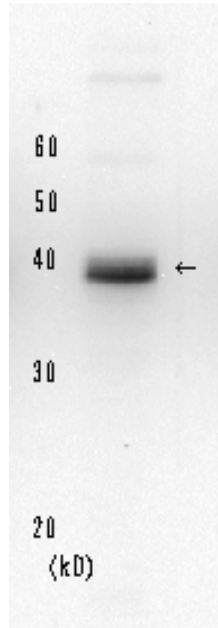


Fig. Detection of XPA protein in crude extract of HeLa cell by western blotting, using the monoclonal antibody 5F12.

*For research use only. Not for clinical diagnosis.*

Manufactured by BioAcademia Inc.



COSMO BIO Co., LTD.

Inspiration for Life Science

TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN

URL: <http://www.cosmobio.co.jp>

e-mail: [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

[Outside Japan] Phone : +81-3-5632-9617

[国内連絡先] Phone : +81-3-5632-9610

FAX : +81-3-5632-9618

FAX : +81-3-5632-9619



## 抗 XPA

### BACKGROUND

XP (Xeroderma pigmentosum; 色素性乾皮症) は、常染色体劣性遺伝様式をとる遺伝性疾患で、日光に過敏性を示し、若年性皮膚癌を高頻度で発症する。A~G 群、7つの遺伝的相補性群の存在が確認されて折り、XPA 変異は最も重症の症候を示す。XP 群遺伝子群の産物は DNA 上に紫外線等によって形成されるシクロブタン 2 量体、6-4 光産物及び化学物質による種々の DNA 損傷部位に作用して、損傷を受けたヌクレオチドを取り除いて修復する除去修復機構 (NER; Nucleotide Excision Repair) に関与する。

XPA (A 群) タンパク質は 273 アミノ酸より成り、RPA, ERCC1, TFIIH、XAB1, XAB2 タンパク質と複合体を形成し、損傷を受けた DNA 部位に特異的に結合し、除去修復を反応開始させる。本ハイブリドーマは大阪大学田中亀代次教授等が作成した (文献 2)。

<b>Product type</b>	一次抗体
<b>Host</b>	マウス
<b>Source</b>	腹水
<b>Form</b>	液状 1 mg/ml in PBS pH 7.2, 50% glycerol 硫酸ナトリウム分画、カラムクロマトで精製
<b>Volume</b>	250 µg
<b>Concentration</b>	1 mg/ml
<b>Specificity</b>	XPA (A 群) タンパク質
<b>Antigen</b>	大腸菌で発現した全長の組換え体ヒト XPA タンパク質
<b>Clone</b>	5F12
<b>Isotype</b>	IgG2b

**Application notes** WB, ELISA, Inhibition of in vitro excision repair reaction

#### Recommended use

- 1) in vitro 除去修復反応の阻害 (ニック導入の阻害)
- 2) XPA の ERCC1,TFIIH との結合阻害

#### Recommended dilutions

Western blotting: 0.1~1 µg/ml (図 1)

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

#### Staining Pattern

**Cross reactivity** ヒト、マウス (配列の保存性から, not tested)

**Storage** -20°C (長期保存, -70°C)

**References** 1) Friedberg EC et al., DNA Repair and Mutagenesis. 2nd Ed. ASM Press (2006)

2) SaijoM et al., Biochem Biophys Res Comm 321:815 (2004)

3) Tanaka K et al., Nature 348:73 (1990)

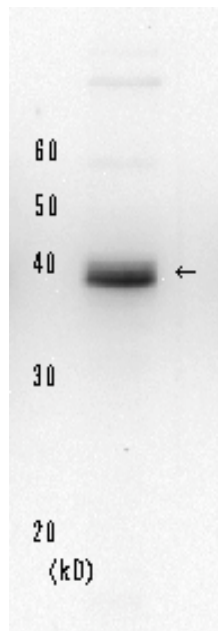


図. 1 HeLa 細胞抽出液中の XPA タンパク質のモノクローン抗体 5F12 を用いたウエスタンブロッティングによる検出。

*For research use only. Not for clinical diagnosis.*

Manufactured by BioAcademia Inc.



COSMO BIO Co., LTD.

Inspiration for Life Science

TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN

URL: <http://www.cosmobio.co.jp>

e-mail: [export@cosmobio.co.jp](mailto:export@cosmobio.co.jp)

[Outside Japan] Phone : +81-3-5632-9617

[国内連絡先] Phone : +81-3-5632-9610

FAX : +81-3-5632-9618

FAX : +81-3-5632-9619