

## Anti-XPA antibody, monoclonal (5F12)

70-031 50  $\mu$ g, 70-032 250  $\mu$ g

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).

### Applications

1. Western blotting (0.1~1  $\mu$ g/ml)
2. ELISA
3. Inhibition of in vitro excision repair reaction.
4. Inhibition of XPA interaction with ERCC1 and TFIIH

Other applications were not tested

**Antigen** : Recombinant full-length human XPA protein

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

**Epitope**: Amino acids 30-47

**Clone**: Mouse monoclonal antibody, 5F12

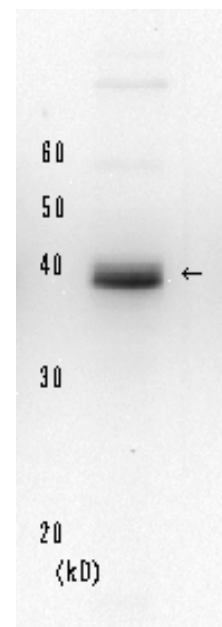
**Subtype**: IgG2b

**Form**: Purified IgG, 1 mg/ml in PBS pH 7.2, 50% glycerol, filter-sterilized

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

### Reference: This antibody is described in Ref.2

1. Friedberg EC, DNA Repair and Mutagenesis. 2<sup>nd</sup> 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)



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

<Distributed by >: SCETI K.K. DF Kasumigaseki Place, 3-6-7 Kasumigaseki, Chiyoda-ku Tokyo 100-0013 JAPAN  
Tel: +81-3-5510-2347 Fax: +81-3-5510-0134

E-mail: [exp-pet@sceti.co.jp](mailto:exp-pet@sceti.co.jp) URL: [www.sceti.co.jp/export/](http://www.sceti.co.jp/export/)

<Manufactured by > : BioAcademia, Inc. 7-7-18 Saito-Asagi, Ibaraki, Osaka 567-0085, JAPAN