abcam

Product datasheet

Anti-XPD antibody ab47186

1 References 2 Images

Overview

Product name	Anti-XPD antibody
Description	Rabbit polyclonal to XPD
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Cow, Pig
Immunogen	Synthetic peptide corresponding to Human XPD aa 1-100 (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as **ab30639**)
Positive control	This antibody gave a positive result in the following whole cell lysates: HeLa; Jurkat; K562
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab47186 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 2 µg/ml. Detects a band of approximately 87 kDa (predicted molecular weight: 87 kDa).
ICC/IF		Use a concentration of 5 µg/ml.

Target

Function	ATP-dependent 5'-3' DNA helicase, component of the core-TFIIH basal transcription factor. Involved in nucleotide excision repair (NER) of DNA by opening DNA around the damage, and in RNA transcription by RNA polymerase II by anchoring the CDK-activating kinase (CAK) complex, composed of CDK7, cyclin H and MAT1, to the core-TFIIH complex. Involved in the regulation of vitamin-D receptor activity. As part of the mitotic spindle-associated MMXD complex it plays a role in chromosome segregation. Might have a role in aging process and could play a causative role in the generation of skin cancers.
Involvement in disease	Defects in ERCC2 are the cause of xeroderma pigmentosum complementation group D (XP-D) [MIM:278730]; also known as XP group D (XPD). Xeroderma pigmentosum is an autosomal recessive pigmentary skin disorder characterized by solar hypersensitivity of the skin, high predisposition for developing cancers on areas exposed to sunlight and, in some cases, neurological abnormalities. Some XP-D patients present features of Cockayne syndrome, including dwarfism, sensorineural deafness, microcephaly, mental retardation, pigmentary retinopathy, ataxia, decreased nerve conduction velocities. Defects in ERCC2 are a cause of trichothiodystrophy photosensitive (TTDP) [MIM:601675]. TTDP is an autosomal recessive disease characterized by sulfur-deficient brittle hair and nails, ichthyosis, mental retardation, impaired sexual development, abnormal facies and cutaneous photosensitivity correlated with a nucleotide excision repair (NER) defect. Neonates with trichothiodystrophy and ichthyosis are usually born with a collodion membrane. The severity of the ichthyosis after the membrane is shed is variable, ranging from a mild to severe lamellar ichthyotic phenotype. There are no reports of skin cancer associated with TTDP. Defects in ERCC2 are the cause of cerebro-oculo-facio-skeletal syndrome type 2 (COFS2) [MIM:610756]. COFS is a degenerative autosomal recessive disorder of prenatal onset affecting the brain, eye and spinal cord. After birth, it leads to brain atrophy, hypoplasia of the corpus callosum, hypotonia, cataracts, microcornea, optic atrophy, progressive joint contractures and growth failure. Facial dysmorphism is a constant feature. Abnormalities of the skull, eyes, limbs, heart and kidney also occur.
Sequence similarities	Belongs to the helicase family. RAD3/XPD subfamily. Contains 1 helicase ATP-binding domain.
Post-translational modifications	ISGylated.

Cellular localization Nucleus. Cytoplasm > cytoskeleton > spindle.

Images

Western blot - Anti-XPD antibody (ab47186)

All lanes : Anti-XPD antibody (ab47186) at 2 µg/ml

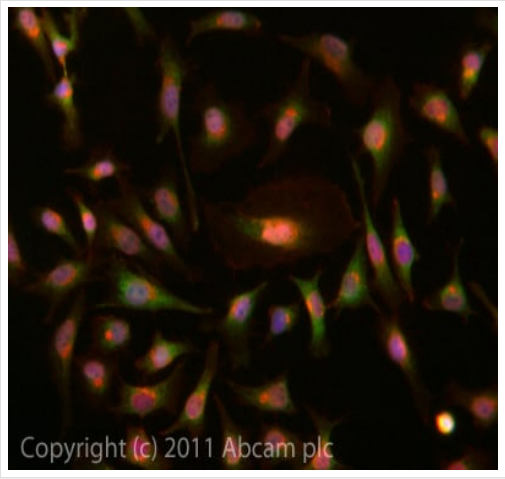
Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : Jurkat whole cell lysate (**ab7899**)
Lane 3 : K-562 whole cell lysate (**ab29306**)

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat polyclonal to rabbit IgG - H&L - Pre Adsorbed (HRP) at 1/3000 dilution

Performed under reducing conditions.

Predicted band size: 87 kDa
Observed band size: 87 kDa
Additional bands at: 120 kDa, 68 kDa. We are unsure as to the identity of these extra bands.



Immunocytochemistry/ Immunofluorescence - Anti-XPD antibody (ab47186)

ICC/IF image of ab47186 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab47186, 5µg/ml) overnight at +4°C. The secondary antibody (green) was **ab96899** Dylight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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