abcam

Product datasheet

Anti-XPD antibody ab111596

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Overview

Product name	Anti-XPD antibody
Description	Rabbit polyclonal to XPD
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Cow
Immunogen	Recombinant fragment, corresponding to a region within amino acids 34-381 of Human XPD (NP_000391).
Positive control	NT2D1, IMR32, U-87 MG and MCF7 cells and whole cell lysates; Human Breast carcinoma tissue.
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. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 78.99% PBS, 1% BSA, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Purification notes	ab111596 is purified by antigen affinity chromatography.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab111596 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		1/500 - 1/3000. Predicted molecular weight: 87 kDa.
IHC-P		1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Alternative antigen retrieval method: Tris-EDTA buffer pH 8.0
ICC/IF		1/100 - 1/500.

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.

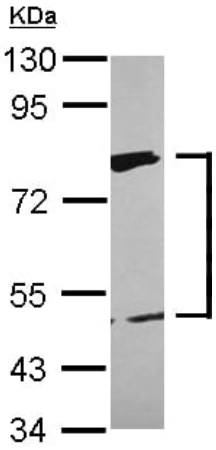
Involvement in disease Defects in ERCC2 are the cause of xeroderma pigmentosum complementation group D (XP-D) [MIM:278730]; also known as XP group D (XPD). Xeroderma pigmentosum is an autosomal recessive pigmentary skin disorder characterized by solar hypersensitivity of the skin, high predisposition 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

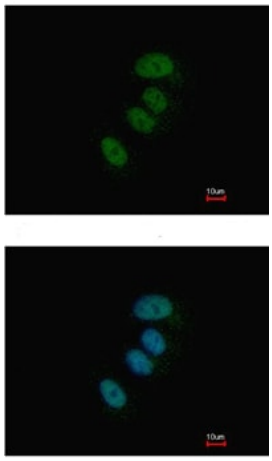


Western blot - Anti-XPD antibody (ab111596)

Anti-XPD antibody (ab111596) at 1/1000 dilution + MCF7 whole cell lysate at 30 µg

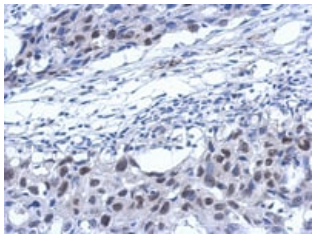
Predicted band size: 87 kDa

7.5% SDS-PAGE.



Immunocytochemistry/ Immunofluorescence - Anti-XPD antibody (ab111596)

ab111596 at 1/500 dilution staining XPD in Paraformaldehyde-fixed MCF7 cells by Immunofluorescence. Lower image shows cells co-stained with Hoechst 33342.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-XPD antibody (ab111596)

ab111596 at range of 1/100- 1/1000 dilution staining XPD in paraffin-embedded Human Breast carcinoma tissue by Immunohistochemistry.

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