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ERCC2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21175a

Product Information

Application	WB, E
Primary Accession	P18074
Reactivity	Human, Rat
Predicted	Mouse, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB51850
Calculated MW	86909

Additional Information

Gene ID	2068
Other Names	TFIIH basal transcription factor complex helicase XPD subunit, Basic transcription factor 2 80 kDa subunit, BTF2 p80, CXPD, DNA excision repair protein ERCC-2, DNA repair protein complementing XP-D cells, TFIIH basal transcription factor complex 80 kDa subunit, TFIIH 80 kDa subunit, TFIIH p80, Xeroderma pigmentosum group D-complementing protein, ERCC2, XPD, XPDC
Target/Specificity	This ERCC2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 687-722 amino acids from the C-terminal region of human ERCC2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ERCC2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ERCC2
Synonyms	XPD, XPDC

Function	ATP-dependent 5'-3' DNA helicase (PubMed: 31253769, PubMed:8413672, PubMed:9771713). Component of the general transcription and DNA repair factor IIH (TFIIH) core complex, not absolutely essential for minimal transcription in vitro (PubMed:10024882, PubMed:17466626, PubMed:9771713). Required for transcription-coupled nucleotide excision repair (NER) of damaged DNA; recognizes damaged bases (PubMed:17466626, PubMed:23352696, PubMed:9771713). Sequestered in chromatin on UV-damaged DNA (PubMed:23352696). When complexed to CDK-activating kinase (CAK), involved in transcription by RNA polymerase II. In NER, TFIIH acts by opening DNA around the lesion to allow the excision of the damaged oligonucleotide and its replacement by a new DNA fragment. The ATP-dependent helicase activity of XPD/ERCC2 is required for DNA opening. Involved in DNA lesion verification (PubMed:31253769). In transcription, TFIIH has an essential role in transcription initiation. When the pre-initiation complex (PIC) has been established, TFIIH is required for promoter opening and promoter escape. Phosphorylation of the C-terminal tail (CTD) of the largest subunit of RNA polymerase II by the kinase module CAK controls the initiation of transcription. XPD/ERCC2 acts by forming a bridge between CAK and the core-TFIIH complex. The structure of the TFIIH transcription complex differs from the NER-TFIIH complex; large movements by XPD/ERCC2 and XPB/ERCC3 are stabilized by XPA which allow this subunit to contact ssDNA (PubMed:31253769, PubMed:33902107). 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.
Cellular Location	Nucleus. Cytoplasm, cytoskeleton, spindle

Background

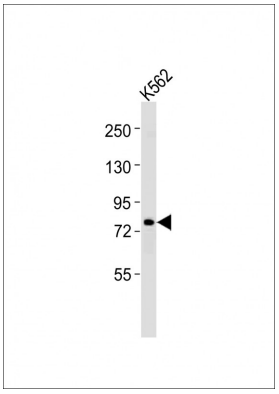
ATP-dependent 5'-3' DNA helicase, component of the core- TFIIH basal transcription factor. Involved in nucleotide excision repair (NER) of DNA by opening DNA around the damage, and in RNA transcription by RNA polymerase II by anchoring the CDK-activating kinase (CAK) complex, composed of CDK7, cyclin 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.

References

Weber C.A.,et al.EMBO J. 9:1437-1447(1990).
Lamerdin J.E.,et al.Genomics 34:399-409(1996).
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Fletjer W.L.,et al.Proc. Natl. Acad. Sci. U.S.A. 89:261-265(1992).

Images

Anti-ERCC2 Antibody (C-term) at 1:1000 dilution + K562 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 87 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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