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XPD Recombinant Rabbit mAb

Catalog # AP99155

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P18074
Other Accession	P18074
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	86909
Physical State	Liquid
Immunogen	A synthesized peptide derived from human XPD
Epitope Specificity	660-700
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	ATP-dependent 5'-3' DNA helicase, component of the general transcription and DNA repair factor IIH (TFIIH) core complex, which is involved in general and transcription-coupled nucleotide excision repair (NER) of damaged DNA and, when complexed to CAK, in RNA transcription by RNA polymerase II.

Additional Information

Gene ID	2068
Other Names	ERCC2_HUMAN; ERCC2; TFIIH subunit XPD; Basic transcription factor 2 80 kDa subunit (BTF2 p80); CXPD; DNA 5'-3' helicase XPD; 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; 5.6.2.3; XPD; XPDC; COFS2; EM9; TFIIH; TTD; TTD1; ERCC excision repair 2, TFIIH core complex helicase subunit; xeroderma pigmentosum complementary group D; excision repair cross-complementing rodent repair deficiency, complementation group 2; excision repair cross-complementation group 2; excision repair cross-complementing rodent repair deficiency, complementation group 2 protein; TFIIH basal transcription factor complex helicase XPB subunit
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1:50-100
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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

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