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ERCC5 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17894b

Product Information

Application	WB, E
Primary Accession	P28715
Other Accession	NP_000114.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB26849
Calculated MW	133108
Antigen Region	1151-1178

Additional Information

Gene ID	2073
Other Names	DNA repair protein complementing XP-G cells, 31--, DNA excision repair protein ERCC-5, Xeroderma pigmentosum group G-complementing protein, ERCC5, ERCM2, XPG, XPGC
Target/Specificity	This ERCC5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1151-1178 amino acids from the C-terminal region of human ERCC5.
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	ERCC5 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ERCC5
Synonyms	ERCM2, XPG, XPGC

Function	Single-stranded structure-specific DNA endonuclease involved in DNA excision repair (PubMed:32522879, PubMed:32821917, PubMed:7651464, PubMed:8078765, PubMed:8090225, PubMed:8206890). Makes the 3'incision in DNA nucleotide excision repair (NER) (PubMed:32522879, PubMed:32821917, PubMed:8078765, PubMed:8090225). Binds and bends DNA repair bubble substrate and breaks base stacking at the single-strand/double-strand DNA junction of the DNA bubble (PubMed:32522879). Plays a role in base excision repair (BER) by promoting the binding of DNA glycosylase NTHL1 to its substrate and increasing NTHL1 catalytic activity that removes oxidized pyrimidines from DNA (PubMed:9927729). Involved in transcription-coupled nucleotide excision repair (TCR) which allows RNA polymerase II-blocking lesions to be rapidly removed from the transcribed strand of active genes (PubMed:16246722). Functions during the initial step of TCR in cooperation with ERCC6/CSB to recognized stalled RNA polymerase II (PubMed:16246722). Also, stimulates ERCC6/CSB binding to the DNA repair bubble and ERCC6/CSB ATPase activity (PubMed:16246722). Required for DNA replication fork maintenance and preservation of genomic stability (PubMed:26833090, PubMed:32522879). Involved in homologous recombination repair (HRR) induced by DNA replication stress by recruiting RAD51, BRCA2, and PALB2 to the damaged DNA site (PubMed:26833090). In TFIIH stimulates the 5'-3' helicase activity of XPD/ERCC2 and the DNA translocase activity of XPB/ERCC3 (PubMed:31253769). During HRR, binds to the replication fork with high specificity and stabilizes it (PubMed:32522879). Also, acts upstream of HRR, to promote the release of BRCA1 from DNA (PubMed:26833090).
Cellular Location	Nucleus. Chromosome. Note=Colocalizes with RAD51 to nuclear foci in S phase (PubMed:26833090). Localizes to DNA double-strand breaks (DBS) during replication stress (PubMed:26833090). Colocalizes with BRCA2 to nuclear foci following DNA replication stress (PubMed:26833090).

Background

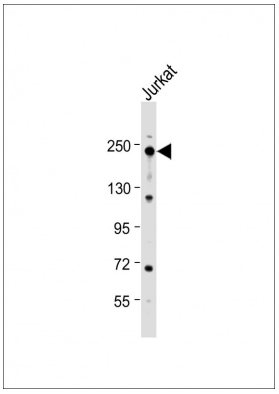
Excision repair cross-complementing rodent repair deficiency, complementation group 5 (xeroderma pigmentosum, complementation group G) is involved in excision repair of UV-induced DNA damage. Mutations cause Cockayne syndrome, which is characterized by severe growth defects, mental retardation, and cachexia. Multiple alternatively spliced transcript variants encoding distinct isoforms have been described, but the biological validity of all variants has not been determined. [provided by RefSeq].

References

Figl, A., et al. Mutat. Res. 702(1):8-16(2010)
Ho-Pun-Cheung, A., et al. Pharmacogenomics J. (2010) In press :
Briggs, F.B., et al. Am. J. Epidemiol. 172(2):217-224(2010)
Monsees, G.M., et al. Breast Cancer Res. Treat. (2010) In press :
Canbay, E., et al. Anticancer Res. 30(4):1359-1364(2010)

Images

Anti-ERCC5 Antibody (C-term) at 1:1000 dilution + Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 133 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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