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XPG Polyclonal Antibody

Catalog # AP73098

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	P28715
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	133108

Additional Information

Gene ID	2073
Other Names	ERCC5; ERCM2; XPG; XPGC; DNA repair protein complementing XP-G cells; DNA excision repair protein ERCC-5; Xeroderma pigmentosum group G-complementing protein
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications. IHC-P~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications. IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

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).

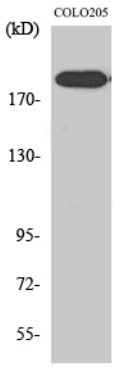
Cellular Location

Nucleus. Chromosome. Note=Colocalizes with RAD51 to nuclear foci in S phase (PubMed:26833090). Localizes to DNA double-strand breaks (DSB) during replication stress (PubMed:26833090). Colocalizes with BRCA2 to nuclear foci following DNA replication stress (PubMed:26833090).

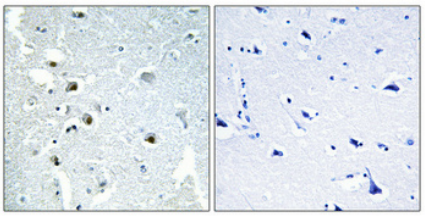
Background

Single-stranded structure-specific DNA endonuclease involved in DNA excision repair. Makes the 3'incision in DNA nucleotide excision repair (NER). Acts as a cofactor for a DNA glycosylase that removes oxidized pyrimidines from DNA. May also be involved in transcription-coupled repair of this kind of damage, in transcription by RNA polymerase II, and perhaps in other processes too.

Images



Western Blot analysis of various cells using XPG Polyclonal Antibody diluted at 1：2000. Secondary antibody was diluted at 1:20000 cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).



Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100(4°,overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negetive contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.