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ERCC8 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10955c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13216
Other Accession	NP_000073.1
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20950
Calculated MW	44055
Antigen Region	210-238

Additional Information

Gene ID	1161
Other Names	DNA excision repair protein ERCC-8, Cockayne syndrome WD repeat protein CSA, ERCC8, CKN1, CSA
Target/Specificity	This ERCC8 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 210-238 amino acids from the Central region of human ERCC8.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	ERCC8 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ERCC8 {ECO:0000303|PubMed:19894250, ECO:0000312|HGNC:HGNC:3439}
Function	Substrate-recognition component of the CSA complex, a DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complex, involved in

transcription-coupled nucleotide excision repair (TC-NER), a process during which RNA polymerase II-blocking lesions are rapidly removed from the transcribed strand of active genes (PubMed:12732143, PubMed:16751180, PubMed:16964240, PubMed:32142649, PubMed:34526721, PubMed:38316879, PubMed:38600235, PubMed:38600236). Following recruitment to lesion-stalled RNA polymerase II (Pol II), the CSA complex mediates ubiquitination of Pol II subunit POLR2A/RPB1 at 'Lys- 1268', a critical TC-NER checkpoint, governing RNA Pol II stability and initiating DNA damage excision by TFIIH recruitment (PubMed:12732143, PubMed:16751180, PubMed:16964240, PubMed:32142649, PubMed:32355176, PubMed:34526721, PubMed:38316879, PubMed:38600235, PubMed:38600236). The CSA complex also promotes the ubiquitination and subsequent proteasomal degradation of ERCC6/CSB in a UV-dependent manner; ERCC6 degradation is essential for the recovery of RNA synthesis after transcription-coupled repair (PubMed:16751180). Also plays a role in DNA double-strand breaks (DSSBs) repair by non-homologous end joining (NHEJ) (PubMed:29545921).

Cellular Location

Nucleus. Chromosome Nucleus matrix. Note=Recruited to lesion- stalled RNA polymerase II (Pol II) sites by ERCC6/CSB (PubMed:32355176). UV-induced translocation to the nuclear matrix is dependent on ERCC6/CSB (PubMed:26620705).

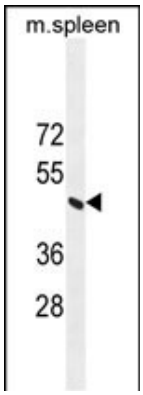
Background

This gene encodes a WD repeat protein, which interacts with Cockayne syndrome type B (CSB) protein and with p44 protein, a subunit of the RNA polymerase II transcription factor IIH. Mutations in this gene have been identified in patients with hereditary disease Cockayne syndrome (CS). CS cells are abnormally sensitive to ultraviolet radiation and are defective in the repair of transcriptionally active genes.

References

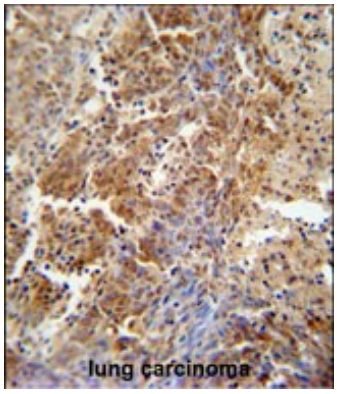
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Images



ERCC8 Antibody (Center) (Cat. #AP10955c) western blot analysis in mouse spleen tissue lysates (35ug/lane).This demonstrates the ERCC8 antibody detected the ERCC8 protein (arrow).

ERCC8 antibody (Center) (Cat. #AP10955c) immunohistochemistry analysis in formalin fixed and paraffin embedded human lung carcinoma followed by



peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the ERCC8 antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

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