Store at -20°C

#11963 XPD (D3Z6I) Rabbit mAb

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rev. 05/11/16

Entrez-Gene ID #2068
UniProt ID #P18074

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, R, Mk	80 kDa	Rabbit IgG**

Background: XPB and XPD are ATPase/helicase subunits of the TFIIH complex that are involved in nucleotide excision repair (NER) to remove lesions and photoproducts generated by UV light (1). XPB and XPD are 3'-5' and 5'-3' DNA helicases, respectively, that play a role in opening of the DNA damage site to facilitate repair (2,3). XPB and XPD both play an important role in maintaining genomic stability, and researchers have linked mutations of these proteins to Xeroderma Pigmentosum (XP) and Trichothiodystrophy (TTD). XP patients have abnormalities in skin pigmentation and are highly susceptible to skin cancers, while TTD patients exhibit symptoms such as brittle hair, neurological abnormalities, and mild photosensitivity (4). In addition to their role in NER, XPB and XPD are involved in transcription initiation as part of the TFIIH core complex (5). The helicase activity of XPB unwinds DNA around the transcription start site to facilitate RNA polymerase II promoter clearance and initiation of transcription (6). XPD plays a structural role linking core TFIIH components with the cdk-activating kinase (CAK) complex that phosphorylates the C-terminus of the largest subunit of RNA polymerase II, leading to transcription initiation (7).

Specificity/Sensitivity: XPD (D3Z6I) Rabbit mAb recognizes endogenous levels of total XPD protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human XPD protein.

Background References:

(1) Oksenych, V. and Coin, F. (2010) *Cell Cycle* 9, 90-6.

(2) Evans, E. et al. (1997) *EMBO J* 16, 6559-73.

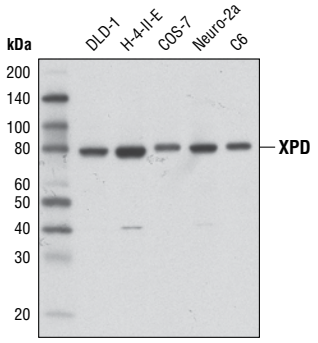
(3) Riedl, T. et al. (2003) *EMBO J* 22, 5293-303.

(4) Lehmann, A.R. (2003) *Biochimie* 85, 1101-11.

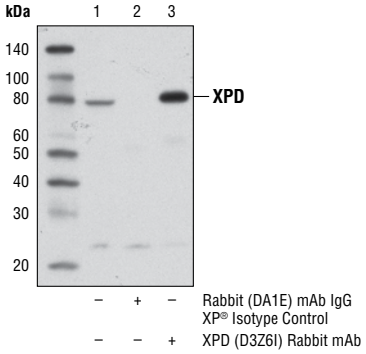
(5) Drapkin, R. et al. (1994) *Nature* 368, 769-72.

(6) Holstege, F.C. et al. (1996) *EMBO J* 15, 1666-77.

(7) Rossignol, M. et al. (1997) *EMBO J* 16, 1628-37.



Western blot analysis of extracts from various cell lines using XPD (D3Z6I) Rabbit mAb.



Immunoprecipitation of XPD from DLD-1 cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or XPD (D3Z6I) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using XPD (D3Z6I) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.