Revision 1

#5416 Store at -20C

DDB-2 (D4C4) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M	Endogenous	43	Rabbit IgG	#Q92466	1643

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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.

Specificity / Sensitivity

DDB-2 (D4C4) Rabbit mAb recognizes endogenous levels of total DDB-2 protein.

Species predicted to react based on 100% sequence homology:

Rat, Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to amino acids surrounding Ala174 of human DDB-2.

Background

Damaged **D**NA-**B**inding Protein (DDB) consists of a 127 kDa subunit (DDB-1) and a 48 kDa subunit (DDB-2) that contribute to the formation of the UV-damaged DNA-binding protein complex (UV-DDB) (1-3). In conjunction with CUL4A and ROC-1, the UV-DDB complex forms an E3 ubiquitin ligase that recognizes a broad spectrum of DNA lesions such as cyclobutane pyrimidine dimers, 6-4 photoproducts, apurinic sites and short mismatches. The complex polyubiquitinates components of the nucleotide excision repair pathway (4-6). Loss of DDB activity has been identified in a subset of xeroderma pigmentosum complementation group E (XP-E) patients and has been linked to the deficient repair of cyclobutane pyrimidine dimers in cells derived from these patients (7-10).

Background References

1. Reardon, J.T. et al. (1993) *J Biol Chem* 268, 21301-8.
2. Keeney, S. et al. (1993) *J Biol Chem* 268, 21293-300.
3. Hwang, B.J. and Chu, G. (1993) *Biochemistry* 32, 1657-66.
4. Chu, G. and Chang, E. (1990) *Proc Natl Acad Sci USA* 87, 3324-7.
5. Hirschfeld, S. et al. (1990) *Mol Cell Biol* 10, 2041-8.
6. Payne, A. and Chu, G. (1994) *Mutat Res* 310, 89-102.
7. Chu, G. and Chang, E. (1988) *Science* 242, 564-7.
8. Nichols, A.F. et al. (1996) *J Biol Chem* 271, 24317-20.
9. Kataoka, H. and Fujiwara, Y. (1991) *Biochem Biophys Res Commun* 175, 1139-43.
10. Keeney, S. et al. (1992) *Mutat Res* 273, 49-56.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

WB: Western Blotting

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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 **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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