

ZYMED® Laboratories

invitrogen immunodetection

Qty: 100µg/400 µL

Rabbit anti-RAD6 (C-term)

Catalog No. 38-0700

Lot No.

Rabbit anti-RAD6 (C-term)

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is peptide-affinity purified from rabbit antiserum.

PAD: ZMD.335

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the human, mouse and rat RAD6 proteins.

SPECIFICITY

This antibody reacts with the C-terminal region of the human, mouse and rat RAD6 proteins. On Western blots, it identifies the target band at ~17 kDa.

REACTIVITY

Reactivity has been confirmed with human MCF-7 and MDA-MB231 cell lysates and mouse testis homogenates. Based on 100% amino acid sequence conservation, reactivity with rat is also expected.

Sample	Western Blotting	Immuno-precipitation
Human	+++	0*
Mouse	+++	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

* No reactivity observed under conditions tested.

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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PIN: 31519

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BACKGROUND

The human RAD6 protein is expressed by two genes designated HHR6A and HHR6B, which express two homologs closely related to the yeast (*Saccharomyces cerevisiae*) RAD6/UBC2.¹ RAD6 is highly conserved in eukaryotes. HHR6A and HHR6B share 95% similarity and are localized on human chromosome Xq24-q25 and 5q23-q31, respectively.² They encode a 17 kDa ubiquitin-conjugating enzyme (UBCs)(E2), which is crucial for post replication repair of DNA and damage-induced mutagenesis.³ In yeast, RAD6-RAD18 interaction is essential for error-free and error-prone lesion bypass. The RAD6 protein binds with RAD18 zinc finger motif to form a specific complex, which then bind to the damage sites of DNA through the single stranded DNA binding motif of RAD18.^{4,5} The degradation of the stalled DNA replication components is then carried out by the ubiquitin conjugating enzyme activity of RAD6.^{6,7} The two principal elements of the RAD6 pathway, RAD6 and the MMS2-UBC13 heterodimer are recruited to the chromatin by the two RING-finger proteins RAD18 and RAD5 in yeast⁸ which suggests the emerging importance of RING finger domains in the ubiquitin conjugation system. PCNA (proliferating cell nuclear antigen) is a substrate of RAD6-mediated mono-ubiquitination and damage-induced PCNA ubiquitination is essential for DNA repair.⁹

REFERENCES

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RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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