



Qty: 100 µg/200 µl

Mouse anti-Mms2

For Research Use Only

Catalog No. 37-1200

Lot No.

Mouse anti-Mms2

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

FORM

This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: 2H11

ISOTYPE: Mouse IgG₁-kappa

IMMUNOGEN

Recombinant human Mms2.

SPECIFICITY

This antibody is specific for the ~21 kDa Mms2 (UEV1) protein.

REACTIVITY

Reactivity has been confirmed with human HepG2 cell lysates and mouse NIH 3T3 cells.

Sample	Immuno-fluorescence	Western Blotting	ELISA
Human	++	+++	ND
Mouse	++	ND	ND
Immunogen	N/A	N/A	+++

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

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.

Immunofluorescence : 2-5 µg/mL
Western Blotting : 1-3 µg/mL
ELISA : 0.1 – 1.0 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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(Rev 10/08) DCC-08-1089

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BACKGROUND

In the *S.cerevisiae* yeast proteome, 13 different E2 ubiquitin-conjugating enzymes (Ubcs) exist, all sharing a conserved Cys residue that acts as the active site in a region known as the Ubc-motif. The yeast Mms2 protein belongs to a family of non-canonical E2 proteins, collectively called ubiquitin-conjugating enzyme variants (UEVs), that lack the defining active-site Cys of classical Ubc family members.¹ Consistent with the absence of the active-site Cys, Mms2 does not appear to possess Ubc activity.² However, the yeast Mms2 protein has been identified as a positive regulator of the assembly of poly-ubiquitin chains via the Lys63 residue of ubiquitin,³ which implicates it in the ubiquitin-proteasome protein degradation pathway. Yeast Mms2 also functions in the *RAD6* pathway of error-free DNA postreplication repair (PRR),² the formation of a heterodimer with the Ubc13 E2 partner is required for this activity.⁴

Two human homologs of the yeast Mms2 protein, hMms2 and CROC1, have been identified. CROC1 and hMms2 have been observed to transcriptionally activate the promoter of the *c-fos* protooncogene, which protects cells from DNA damage.¹ Human Mms2 is also known to form a stable complex with human Ubc13, suggesting that the human protein may have an analogous role in error-free DNA repair to its yeast homolog.⁵ The human Mms2-Ubc13 complex plays a role in NFκB signal transduction.⁶

REFERENCES

1. Xiao W, et al. *Nuc Acids Res* 26(17):3908-3914, 1998.
2. Broomfield S, et al. *PNAS* 95:5678-5683, 1998.
3. Hofmann RM, Pickart CM. *Cell* 96:645-653, 1999.
4. Brusky J, et al. *Curr Genet* 37(3):168-174, 2000.
5. McKenna S, et al. *J Biol Chem* 276(43):40120-40126, 2001.
6. Moraes T, et al. *Nat Struct Biol* 8(8):669-673, 2001.

RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Mouse anti-Ubc13	4E11	37-1100
Mouse anti-Ubc3	2E3B5	32-2000
Rabbit anti-Ubc3	HC34	71-9900
Mouse anti-Ubiquitin	Ubi-1	13-1600
Rabbit anti-Cdc14A	ZMD.231	34-8100
Rabbit anti-Cdc14B	ZMD.239	34-8900
Rabbit anti-Cdc34	ZMD.09	34-2700
Mouse anti-RAD17	1C6/2	35-6400
Mouse anti-RAD51	3C10	35-6500
Rabbit anti-NFκB (p50)	ZK50	51-3500
Mouse anti-NFκB (p65)	2A12A7	33-9300
Rabbit anti-NFκB (p65)	P65C	51-0500
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

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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