



Qty: 100 µg/200 µl

Mouse anti-PTEN

Catalog No. 32-5800

Lot No.

Mouse anti-PTEN

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: 2F4C9

ISOTYPE: Mouse IgG_{2a}

IMMUNOGEN

Recombinant protein derived from the PTEN protein.

SPECIFICITY

This antibody detects the ~55 kDa PTEN protein. The antibody will recognize both endogenous PTEN and transfected, overexpressed PTEN.

REACTIVITY

This antibody reacts specifically with the human PTEN protein. Reactivity with other species has not been tested. Reactivity was confirmed with cell lines which contain endogenous PTEN (NIH3T3, K652, and DU145 prostate cancer line) as well as transfected cell lines (Rat1 and 293T cells). No cross-reactivity to any other proteins has been detected.

| Sample | Western Blotting |
|-----------|------------------|
| Human | +++ |
| Mouse | ++ |
| Immunogen | +++ |

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable NA)

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

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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PI325800

(Rev 10/08) DCC-08-1089

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BACKGROUND

PTEN (also known as MMAC1) was recently identified as a candidate tumor suppressor gene. Deletions or mutations within the PTEN gene have been observed in a variety of tumor cell lines and cancer cell types. Based on PTEN's structural features, the protein was originally thought to be a protein tyrosine phosphatase. However, recent evidence indicates that PTEN is actually a lipid phosphatase rather than a protein tyrosine phosphatase. In fact, the target substrate for PTEN is phosphatidylinositol-3,4,5-triphosphate (Ptd-Ins(3,4,5)P₃). Ptd-Ins(3,4,5)P₃ is a critical second messenger involved in cell signaling and growth control. Ptd-Ins(3,4,5)P₃ is produced by phosphorylation of Ptd-Ins(4,5)P₂ by PI 3-kinase in response to stimulation by various ligands. By dephosphorylating Ptd-Ins(3,4,5)P₃, PTEN functions to "turn off" the Ptd-Ins(3,4,5)P₃ pathway and thereby suppress cellular proliferation.

REFERENCES

1. Maehama, T and Dixon, J.E.; *J. Biol. Chem.* 273: 13375-13378 (1998).
2. Li, J., et al; *Science* 275: 1943-1947 (1997).
3. Steck, P.A., et al; *Nat. Genet* 15: 356-362 (1997).
4. Podsypanina, K., et al; *Proc Natl Acad Sci USA*, 96 (4): 1563-8, (1999).

RELATED PRODUCTS

| Product | Clone/PAD | Cat. No. |
|----------------------|------------------|-----------------|
| Ms x BRCA1 | MS110 | 33-7300 |
| Ms x BRCA1 | MS13 | 33-7400 |
| Ms x BRCA1 | SG11 | 33-7500 |
| Rb x FHIT | Poly - ZR44 | 71-9000 |
| Rb x FHIT | Poly - ZP54 | 71-9100 |
| Ms x MDM2 | 1F2 | 33-7100 |
| Ms x MLH1 | 14 | 33-7800 |
| Ms x MSH2 | GB12 | 33-8000 |
| Ms x p53 | PAb1801 | 13-4000 |
| Ms x p53-Sepharose | PAb1801 | 13-4041 |
| Ms x p53 | PAb240 | 13-4100 |
| Ms x p53 | BP53-12 | 13-2200 |
| Ms x Rb Gene Product | Rb1 (1F8) | 13-4200 |
| Ms x Rb Gene Product | MAB1 (Rb20B3) | 28-0007 |
| Rb x p21 (Cip1/WAF1) | Polyclonal | 71-1000 |
| Ms x p21 (Cip1/WAF1) | EA10 | 33-7000 |

| Product | Conjugate | Cat. No. |
|--|------------------|-----------------|
| Goat anti-Rabbit IgG (H+L) (ZyMax™ Grade) | Purified | 81-6100 |
| | FITC | 81-6111 |
| | TRITC | 81-6114 |
| | Cy™3 | 81-6115 |
| | Cy™5 | 81-6116 |
| | HRP | 81-6120 |
| | AP | 81-6122 |
| | Biotin | 81-6140 |
| Protein A | Sepharose® 4B | 10-1041 |
| rec-Protein G | Sepharose® 4B | 10-1241 |

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