Qty: 100 µg/400 µL

Rabbit anti-CAP43

Catalog No. 42-6200

Lot No.

Rabbit anti-CAP43

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 epitope-affinity purified from rabbit antiserum.

PAD: ZMD.583

IMMUNOGEN
Synthetic peptide derived from the N-terminal region of the human and predicted chimpanzee CAP43 proteins, which differs from predicted bovine by one amino acid change and from mouse and rat by two amino acid changes

SPECIFICITY
This antibody is specific for the CAP43 (N-myc downstream regulated gene 1 protein, Ndrg1, differentiation-related gene 1 protein, DRG1, reducing agents and tunicamycin-responsive protein, RTP, Rit42) protein. On Western blots, it identifies the target band at ~43 kDa.

REACTIVITY
Reactivity has been confirmed with human A549 cell lysates and NiCl2-treated MCF-7 cells. Based on amino acid sequence homology, reactivity with chimpanzee, bovine, mouse, and rat is expected.

Sample	Western Blotting	Immuno-precipitation
Human	+++	+++
Chimpanzee	ND	ND
Bovine	ND	ND
Mouse	ND	ND
Rat	ND	ND

(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.

Western Blotting: 2-3 µg/mL
Immunoprecipitation: 5 µg/IP reaction

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)

BACKGROUND

CAP43 (N-myc downstream regulated gene 1 protein, differentiation-related gene 1 protein, Ndrg1, DRG1, reducing agents and tunicamycin-responsive protein, RTP, Rit42) is a member of the N-myc downregulated gene family which belongs to the alpha/beta hydrolase superfamily. The protein encoded by this gene is a cytoplasmic protein involved in stress responses, hormone responses, cell growth, and differentiation. Mutation in this gene has been reported to be causative for hereditary motor and sensory neuropathy-Lom. CAP43-deficient mice exhibit a progressive demyelinating disorder of peripheral nerves.[1] CAP43 expression is ubiquitous with the most prominent expression in placental membranes and prostate, kidney, small intestine, and ovary tissues. Reduced expression has been observed in some adenocarcinomas compared to normal tissues; for example, CAP43 is expressed at lower levels in colon cancer.[2] However, in a variety of cancers, including lung, brain, melanoma, liver, prostate, breast, and renal cancers, CAP43 protein has been reported to be overexpressed in cancer cells as compared to their normal counterparts.[3] 17beta-estradiol (E2) induces down-regulation of CAP43 through ER-alpha-dependent pathways in breast cancer cells both in culture and in patients.[4] In pancreatic cancer, overexpression of CAP43 leads to tumor growth suppression through modulation of angiogenesis.[5]

REFERENCES

1. Okuda T, et al. *Mol Cell Biol* 24(9):3949-3956, 2004.
2. Zhou D, et al. *Cancer Res* 58(10):2182-2189, 1998.
3. Cangul H, et al. Env Health Perspect 110(supp 5):783-788, 2002.
4. Fotovati A, et al. *Clin Cancer Res* 12(10):3010-3018, 2006.
5. Maruyama Y, et al. *Cancer Res* 66(12):6233-6242, 2006.

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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