

# MA2 (B-8): sc-390762



The Power to Question

## BACKGROUND

Paraneoplastic neurological disorders (PNDs) are rare syndromes that are caused by, or associated with, an underlying neoplasm. The most common neoplasm among young male patients is testicular cancer, but the leading cause among other patients is lung cancer. Most PNDs are caused by an immune response against onconeural antigens, causing progressive neurological damage. The paraneoplastic antigen MA family contains three known members: MA1, MA2 and MA3. MA1, also designated neuron- and testis-specific protein 1, is a nucleolar protein in normal cells but localizes to the cytoplasm of tumor cells. MA2, also designated onconeural antigen MA2, is a nucleolar protein expressed in brain and testis. MA3 is highly expressed in brain and testis and is expressed at low levels in heart, trachea and kidney.

## REFERENCES

1. Barnett, M., et al. 2001. Paraneoplastic brain stem encephalitis in a woman with anti-MA2 antibody. *J. Neurol. Neurosurg. Psychiatry* 70: 222-225.
2. Sahashi, K., et al. 2003. Anti-MA2 antibody related paraneoplastic limbic/brain stem encephalitis associated with breast cancer expressing MA1, MA2, and MA3 mRNAs. *J. Neurol. Neurosurg. Psychiatr.* 74: 1332-1335.
3. Dalmau, J., et al. 2004. Clinical analysis of anti-MA2-associated encephalitis. *Brain* 127: 1831-1844.
4. Overeem, S., et al. 2004. Hypocretin-1 CSF levels in anti-MA2 associated encephalitis. *Neurology* 62: 138-140.
5. Waragai, M., et al. 2005. Anti-MA2 associated paraneoplastic neurological syndrome presenting as encephalitis and progressive muscular atrophy. *J. Neurol. Neurosurg. Psychiatry* 77: 111-113.

## CHROMOSOMAL LOCATION

Genetic locus: PNMA2 (human) mapping to 8p21.2; Pnma2 (mouse) mapping to 14 D1.

## SOURCE

MA2 (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 121-149 of MA2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>3</sub> lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390762 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

MA2 (B-8) is recommended for detection of MA2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MA2 siRNA (h): sc-62573, MA2 siRNA (m): sc-62574, MA2 shRNA Plasmid (h): sc-62573-SH, MA2 shRNA Plasmid (m): sc-62574-SH, MA2 shRNA (h) Lentiviral Particles: sc-62573-V and MA2 shRNA (m) Lentiviral Particles: sc-62574-V.

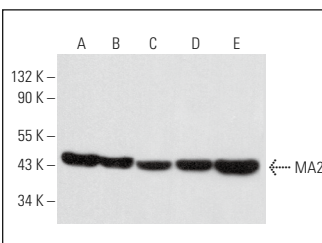
Molecular Weight of MA2: 40 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, SK-N-SH cell lysate: sc-2410 or c4 whole cell lysate: sc-364186.

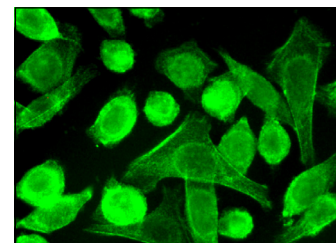
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



MA2 (B-8): sc-390762. Western blot analysis of MA2 expression in IMR-32 (A), SK-N-SH (B), c4 (C), PC-12 (D) and C6 (E) whole cell lysates. Detection reagent used: m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM.



MA2 (B-8): sc-390762. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Pinson, M.R., et al. 2022. Gag-like proteins: novel mediators of prenatal alcohol exposure in neural development. *Alcohol. Clin. Exp. Res.* 46: 556-569.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.