SANTA CRUZ BIOTECHNOLOGY, INC.

MA1 (G-10): sc-166915

SANTA CRUZ BIOTECHNOLOGY

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 onconeuronal 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. Dalmau, J., et al. 1999. MA1, a novel neuron- and testis-specific protein, is recognized by the serum of patients with paraneoplastic neurological disorders. Brain 122: 27-39.
2. Rosenfeld, M.R., et al. 2001. Molecular and clinical diversity in paraneoplastic immunity to MA proteins. Ann. Neurol. 50: 339-348.
3. Pellkofer, H., et al. 2004. Modelling paraneoplastic CNS disease: T-cells specific for the onconeuronal antigen PNMA1 mediate autoimmune encephalomyelitis in the rat. Brain 127: 1822-1830.
4. Schüller, M., et al. 2005. The human PNMA family: novel neuronal proteins implicated in paraneoplastic neurological disease. J. Neuroimmunol. 169: 172-176.

CHROMOSOMAL LOCATION

Genetic locus: PNMA1 (human) mapping to 14q24.3; Pnma1 (mouse) mapping to 12 D1.

SOURCE

MA1 (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 60-90 within an internal region of MA1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MA1 (G-10) is available conjugated to agarose (sc-166915 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166915 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166915 PE), fluorescein (sc-166915 FITC), Alexa Fluor® 488 (sc-166915 AF488), Alexa Fluor® 546 (sc-166915 AF546), Alexa Fluor® 594 (sc-166915 AF594) or Alexa Fluor® 647 (sc-166915 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166915 AF680) or Alexa Fluor® 790 (sc-166915 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166915 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MA1 (G-10) is recommended for detection of MA1 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 MA1 siRNA (m): sc-62572, MA1 siRNA (m): sc-62572, MA1 shRNA Plasmid (m): sc-62572-SH, MA1 shRNA Plasmid (m): sc-62572-SH, MA1 shRNA (m) Lentiviral Particles: sc-62572-V and MA1 shRNA (m) Lentiviral Particles: sc-62572-V.

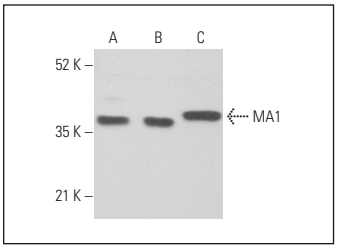
Molecular Weight of MA1: 37 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, IMR-32 cell lysate: sc-2409 or C6 whole cell lysate: sc-364373.

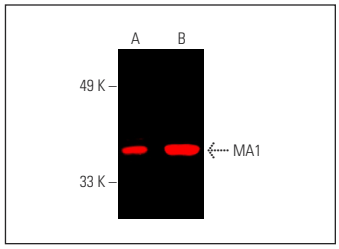
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MA1 (G-10): sc-166915. Western blot analysis of MA1 expression in IMR-32 (**A**), SH-SY5Y (**B**) and C6 (**C**) whole cell lysates.



MA1 (G-10): sc-166915. Near-infrared western blot analysis of MA1 expression in Neuro-2A (**A**) and C6 (**B**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.