

MAST1 (G-4): sc-373845

BACKGROUND

Syntrophin is an adapter protein that functions to bind certain signaling molecules to the dystrophin-associated protein complex. This complex connects the extracellular matrix to the intracellular cytoskeleton for construction and maintenance of the postsynaptic structures in the neuromuscular junction and the central nervous system. Microtubule-associated serine/threonine-protein kinase 1 (MAST1) is a member of the microtubule-associated serine/threonine kinase family and is involved in linking the dystrophin/utrophin network with microtubule filaments via Syntrophin.

CHROMOSOMAL LOCATION

Genetic locus: MAST1 (human) mapping to 19p13.2; Mast1 (mouse) mapping to 8 C3.

SOURCE

MAST1 (G-4) is a mouse monoclonal antibody raised against amino acids 777-887 mapping within an internal region of MAST1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MAST1 (G-4) is available conjugated to agarose (sc-373845 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373845 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373845 PE), fluorescein (sc-373845 FITC), Alexa Fluor® 488 (sc-373845 AF488), Alexa Fluor® 546 (sc-373845 AF546), Alexa Fluor® 594 (sc-373845 AF594) or Alexa Fluor® 647 (sc-373845 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373845 AF680) or Alexa Fluor® 790 (sc-373845 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

MAST1 (G-4) is recommended for detection of MAST1 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 MAST1 siRNA (h): sc-106819, MAST1 siRNA (m): sc-149287, MAST1 shRNA Plasmid (h): sc-106819-SH, MAST1 shRNA Plasmid (m): sc-149287-SH, MAST1 shRNA (h) Lentiviral Particles: sc-106819-V and MAST1 shRNA (m) Lentiviral Particles: sc-149287-V.

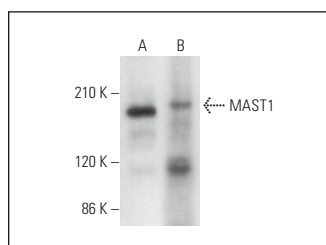
Molecular Weight: 171 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, rat cerebellum extract: sc-2398 or MAST1 (h): 293T Lysate: sc-114725.

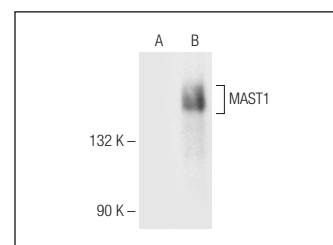
RECOMMENDED SUPPORT REAGENTS

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



MAST1 (G-4): sc-373845. Western blot analysis of MAST1 expression in IMR-32 whole cell lysate (A) and rat cerebellum tissue extract (B).



MAST1 (G-4): sc-373845. Western blot analysis of MAST1 expression in non-transfected: sc-117752 (A) and human MAST1 transfected: sc-114725 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tripathy, R., et al. 2018. Mutations in MAST1 cause mega-corpora-collum syndrome with cerebellar hypoplasia and cortical malformations. *Neuron* 100: 1354-1368.e5.
2. Tyagi, A., et al. 2022. CRISPR/Cas9-based genome-wide screening for deubiquitinase subfamily identifies USP1 regulating MAST1-driven cisplatin-resistance in cancer cells. *Theranostics* 12: 5949-5970.
3. Tan, B., et al. 2022. E3 ubiquitin ligase CHIP inhibits the interaction between Hsp90β and MAST1 to repress radiation resistance in non-small-cell lung cancer stem cells. *Stem Cells Int.* 2022: 2760899.
4. Karapurkar, J.K., et al. 2024. USP28 promotes tumorigenesis and cisplatin resistance by deubiquitinating MAST1 protein in cancer cells. *Cell. Mol. Life Sci.* 81: 145.

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.