

GMF- β (m): 293T Lysate: sc-120543

BACKGROUND

Glia maturation factor β (GMF- β) belongs to the GMF subfamily of the larger Actin-binding protein ADF family. This protein, which is phosphorylated following phorbol ester stimulation, is important for the nervous system. It causes brain cell differentiation, stimulates neural regeneration and inhibits tumor cell proliferation. Overexpression of GMF in astrocytes has been shown to enhance brain-derived neurotrophic factor (BDNF) production. GMF expression is increased by exercise, and the protein is crucial for exercise-induction of BDNF. Through BDNF production, GMF appears to play a role in neuroprotection. In thymoma, T cell development is maintained by GMF- β being produced by the tumor cells.

REFERENCES

1. Kaplan, R., Zaheer, A., Jaye, M. and Lim, R. 1991. Molecular cloning and expression of biologically active human glia maturation factor β . *J. Neurochem.* 57: 483-490.
2. Lim, R. and Zaheer, A. 1995. Phorbol ester stimulates rapid intracellular phosphorylation of glia maturation factor. *Biochem. Biophys. Res. Commun.* 211: 928-934.
3. Lim, R., Zaheer, A., Khosravi, H., Freeman, J.H., Jr., Halverson, H.E., Wemmie, J.A. and Yang, B. 2004. Impaired motor performance and learning in glia maturation factor-knockout mice. *Brain Res.* 1024: 225-232.
4. Zaheer, A., Yang, B., Cao, X. and Lim, R. 2004. Decreased copper-zinc superoxide dismutase activity and increased resistance to oxidative stress in glia maturation factor-null astrocytes. *Neurochem. Res.* 29: 1473-1480.
5. Hotta, N., Aoyama, M., Inagaki, M., Ishihara, M., Miura, Y., Tada, T. and Asai, K. 2005. Expression of glia maturation factor β after cryogenic brain injury. *Brain Res. Mol. Brain Res.* 133: 71-77.
6. Yamazaki, H., Tateyama, H., Asai, K., Fukai, I., Fujii, Y., Tada, T. and Eimoto, T. 2005. Glia maturation factor β is produced by thymoma and may promote intratumoral T cell differentiation. *Histopathology* 47: 292-302.

CHROMOSOMAL LOCATION

Genetic locus: Gmfb (mouse) mapping to 14 C1.

PRODUCT

GMF- β (m): 293T Lysate represents a lysate of mouse GMF- β transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

GMF- β (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive GMF- β antibodies. Recommended use: 10-20 μ l per lane.

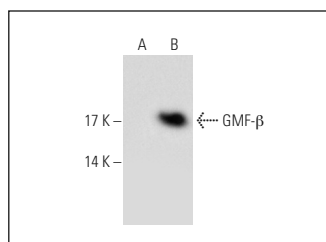
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GMF- β (SP-61): sc-134347 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse GMF- β expression in GMF- β transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



GMF- β (SP-61): sc-134347. Western blot analysis of GMF- β expression in non-transfected: sc-117752 (A) and mouse GMF- β transfected: sc-120543 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.