

MAFbx (m): 293T Lysate: sc-121485

BACKGROUND

Muscle atrophy F-box (MAFbx) is an E3 ubiquitin ligase that initiates ATP-dependent ubiquitin-mediated proteolysis and promotes muscle atrophy. MAFbx transcript is abundant in cardiac and skeletal muscle undergoing atrophy. MAFbx^{-/-} mice are resistant to muscle atrophy. MAFbx is thought to recognize and bind to some phosphorylated proteins and promote their ubiquitination and degradation during skeletal muscle atrophy. MAFbx interacts with MyoD by ubiquitination via a sequence found in transcriptional co-activators and therefore may play an important role in the course of muscle differentiation by determining the abundance of MyoD. MAFbx is specifically expressed in cardiac and skeletal muscle.

REFERENCES

1. Bodine, S.C., et al. 2001. Identification of ubiquitin ligases required for skeletal muscle atrophy. *Science* 294: 1704-1708.
2. Dehoux, M.J., et al. 2003. Induction of MAFbx and MuRF ubiquitin ligase mRNAs in rat skeletal muscle after LPS injection. *FEBS Lett.* 544: 214-217.
3. Glass, D.J. 2003. Signalling pathways that mediate skeletal muscle hypertrophy and atrophy. *Nat. Cell Biol.* 5: 87-90.
4. Rourke, B.C., et al. 2004. Myosin isoform expression and MAFbx mRNA levels in hibernating golden-mantled ground squirrels (*Spermophilus lateralis*). *Physiol. Biochem. Zool.* 77: 582-593.
5. Dehoux, M., et al. 2004. Role of the Insulin-like growth factor I decline in the induction of atrogin-1/MAFbx during fasting and diabetes. *Endocrinology* 145: 4806-4812.
6. Tintignac, L.A., et al. 2005. Degradation of MyoD mediated by the SCF (MAFbx) ubiquitin ligase. *J. Biol. Chem.* 280: 2847-2856.
7. LocusLink Report (LocusID: 114907). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Fbxo32 (mouse) mapping to 15 D1.

PRODUCT

MAFbx (m): 293T Lysate represents a lysate of mouse MAFbx transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

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

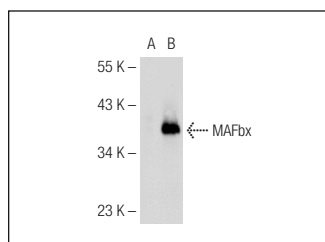
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

MAFbx (F-9): sc-166806 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse MAFbx expression in MAFbx 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-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.

DATA



MAFbx (F-9): sc-166806. Western blot analysis of MAFbx expression in non-transfected: sc-117752 (A) and mouse MAFbx transfected: sc-121485 (B) 293T whole cell lysates.

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.