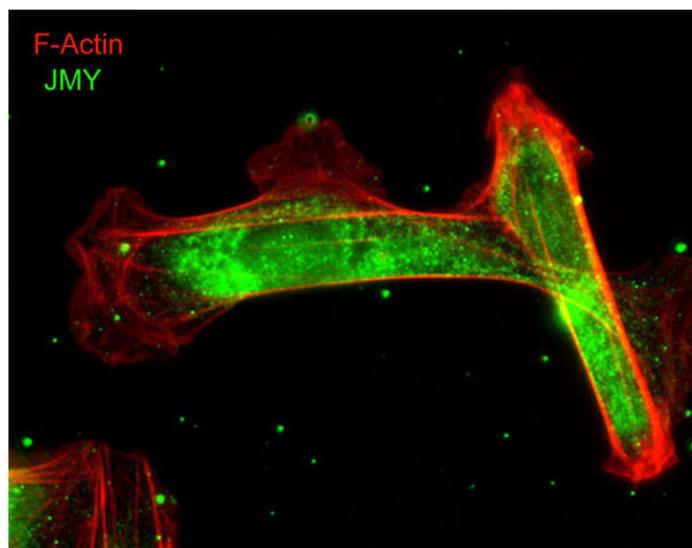


Background

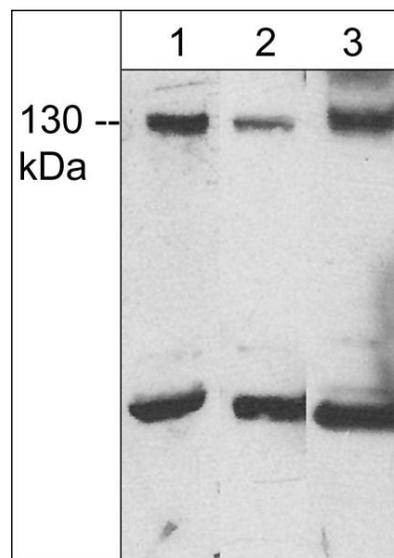
JMY (junction mediating and regulatory protein) is a transcription co-factor, originally identified as a p300-binding protein involved in p53-dependent transcription. Upon DNA damage, JMY is released from Mdm2 inhibition and forms a complex with Strap and p300. This complex recruits PRMT5 to activate the p53 response. Through regulation of p53-dependent transcription, JMY has important roles in the DNA damage response. In addition, JMY contains three carboxyl-terminal WH2 actin binding domains which are commonly found in WASP family proteins. JMY can bind to actin and to the Arp2/3 complex, as well as direct the assembly of actin filaments in vitro. These actin-regulating effects of JMY may have important roles in cell migration. When slow migrating HL-60 cells are differentiated into highly motile neutrophil-like cells, JMY moves from the nucleus to the cytoplasm and is concentrated at the actin-rich leading edge of cells. The loss of JMY leads to decreased cell migration in HL-60 cells. Thus, JMY represents a new class of multifunctional actin assembly factors whose activity may be regulated by cellular localization.

Background References

- Shikama, N. et al. (1999) *Molecular Cell* 4:365.
Coutts, A.S. et al. (2009) *PNAS* 106(47):19872.
Zuchero, J.B. et al. (2009) *Nat Cell Biol.* 11(4):451.



Immunocytochemical labeling of JMY relative to F-actin in chick fibroblasts. The cells were labeled with rabbit polyclonal JMY antibody (JP3991), then detected using appropriate secondary antibody (Green). This labeling is compared to F-actin staining (Red). (Image provided by Dr. Gianluca Gallo at Drexel University).



Western blot showing JMY expression in rat PC12 cells (lane 1), human Jurkat cells (lane 2), and adult mouse heart (lane 3). The blots were probed with anti-JMY (C-terminal region) rabbit polyclonal antibody at 1:500.

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Immunogen**Uniprot ID: Q9QXM1**

JMY synthetic peptide (coupled to carrier protein) corresponds to amino acids in the C-terminal region of mouse JMY. This sequence is highly conserved in human, rat, frog, and zebrafish JMY proteins, and has low homology to other WASP family members.

Buffer and Storage

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Applications

WB	1:1000
ELISA	1:2000
ICC	1:200

Species Reactivity

Hu, Rt, Ms, Ck, Fr

End user should determine optimal dilution for their particular applications and experiments.

Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.

Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot

Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

This antibody was affinity purified using JMY (C-terminal region) peptide (without carrier). The antibody detects a 130 kDa* protein corresponding to the molecular mass of JMY on SDS-PAGE immunoblots of human HeLa, Jurkat cells, rat PC12 cells, and mouse brain and heart.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

JX3995 JMY (C-terminal region) Blocking Peptide

WK6110 N-WASP Phospho-Regulation Antibody Sampler Kit

WK6130 WAVE Phospho-Regulation Antibody Sampler Kit

WP4001 WASH (C-terminal region) Rabbit Polyclonal

AK6060 Actin & Tubulin Antibody Sampler Kit

AK6390 Arp2/3 Complex Regulation Antibody Sampler Kit

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