

JMY (L-16): sc-10027

BACKGROUND

p300 and CBP (CREB-binding proteins) function as coactivators for various transcription factors, including p53. As cofactors, p300 and CBP possess intrinsic acetyltransferase activity which may allow p300/CBP proteins to regulate transcription through direct acetylation and thereafter, enhance DNA binding activity. JMY is a nuclear cofactor for p300 that cooperatively enhances p53 activation in response to cellular stress. The p53 protein requires p300/CBP coactivator proteins in order to transcriptionally activate target genes. When p53 is activated, p300 component of the coactivator protein complexes associate with JMY and potentiate p53-dependent transcription and apoptosis. p53 acts as a sequence-specific transcription factor and upon stimulation, induces transcription of genes involved in growth arrest, including the *waf1/cip1*, *bax*, *MDM2*, and *gadd45* genes. Disruption of p300 and JMY complexes inhibits p53-induced transcription of *bax* and blocks apoptosis. Due to alternative splicing, several isoforms of JMY are produced, and these various isoforms have different influencing effects on p53 activation, with some isoforms markedly enhancing p53 responses compared to the other splicing variants.

REFERENCES

- Lill, N.L., et al. 1997. Binding and modulation of p53 by p300/CBP coactivators. *Nature* 387: 823-827.
- Snowden, A.W. et al. 1998. Cell cycle regulation of the transcriptional coactivators p300 and CREB binding protein. *Biochem. Pharmacol.* 55: 1947-1954.
- Thomas, A. et al. 1998. Suppression of the p300-dependent MDM2 negative-feedback loop induces the p53 apoptotic function. *Genes Dev.* 12: 1975-1985.
- Liu, L., et al. 1999. p53 sites acetylated *in vitro* by PCAF and p300 are acetylated *in vivo* in response to DNA damage. *Mol. Cell. Biol.* 19: 1202-1209.
- Shikama, N., et al. 1999. A novel cofactor for p300 that regulates the p53 response. *Mol. Cell* 4: 365-376.
- Yuan, Z.M., et al. 1999. Role for p300 in stabilization of p53 in the response to DNA damage. *J. Biol. Chem.* 274: 1883-1886.

CHROMOSOMAL LOCATION

Genetic locus: JMY (human) mapping to 5q14.1; Jmy (mouse) mapping to 13 C3.

SOURCE

JMY (L-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of JMY of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10027 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

JMY (L-16) is recommended for detection of JMY of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

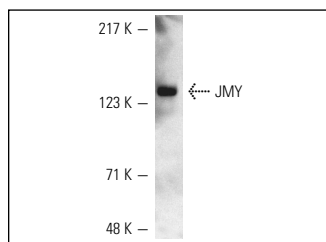
JMY (L-16) is also recommended for detection of JMY in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for JMY siRNA (h): sc-35724, JMY siRNA (m): sc-35725, JMY shRNA Plasmid (h): sc-35724-SH, JMY shRNA Plasmid (m): sc-35725-SH, JMY shRNA (h) Lentiviral Particles: sc-35724-V and JMY shRNA (m) Lentiviral Particles: sc-35725-V.

Molecular Weight of JMY: 133 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210

DATA



JMY (L-16): sc-10027. Western blot analysis of JMY expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

- Hershko, T., et al. 2005. Novel link between E2F and p53: proapoptotic cofactors of p53 are transcriptionally upregulated by E2F. *Cell Death Differ.* 12: 377-383.

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.

MONOS
Satisfaction
Guaranteed

Try **JMY (G-11): sc-166030**, our highly recommended monoclonal alternative to JMY (L-16).