SANTA CRUZ BIOTECHNOLOGY, INC.

Mos^{xe} (R38.1): sc-53372

BACKGROUND

The cellular homolog of the v-Mos oncogene, originally derived from the Moloney strain murine sarcoma virus, has now been isolated from several species including human, mouse, chicken and *Xenopus*. In each of these species, the c-Mos proto-oncogene locus consists of a single exon which encodes Mos, a serine/threonine protein kinase involved in the regulation of the meiotic cell cycle in vertebrate oöcytes. Mos function during oöcyte maturation is thought to be exerted through the stabilization or activation of the maturation promoting factor (MPF) complex. While the level of Mos expression is generally low in somatic cells, Mos is expressed at relatively high levels in germ cells. Mos can efficiently cause oncogenic transformation of somatic cells when ectopically expressed during the G_1 phase of the cell cycle. Mos activates MAPK, possibly through direct phosphorylation of the MAPKK MEK-1.

REFERENCES

1. Klein, G., et al. 1981. The role of gene dosage and genetic transpositions in carcinogenesis. Nature 294: 313-318.
2. Watson, R., et al. 1982. Human DNA sequence homologous to the transforming gen (Mos) of Moloney murine sarcoma virus. Proc. Natl. Acad. Sci. USA 79: 4078-4082.
3. Propst, F., et al. 1985. Expression of c-Mos proto-oncogene transcripts in mouse tissues. Nature 315: 516-518.
4. Schmidt, M., et al. 1988. Chicken homolog of the Mos proto-oncogene. Mol. Cell. Biol. 8: 923-929.
5. Okazaki, K., et al. 1995. MAP kinase activation is essential for oncogenic transformation of NIH/3T3 cells by Mos. Oncogene 10: 1149-1157.
6. Chen, M., et al. 1995. Ser 3 is important for regulating Mos interaction with and stimulation of mitogen-activated protein kinase kinase. Mol. Cell. Biol.15: 4727-4734.
7. Pham, C.D., et al. 1995. Characterization of MEK1 phosphorylation by the v-Mos protein. Oncogene 10: 1683-1688.
8. Robertson, S.C., et al. 1996. Identification of an autoinhibitory region in the activation loop of the Mos protein kinase. Mol. Cell. Biol. 16: 3472-3479.
9. Mendez, R., et al. 2000. Phosphorylation of CPE binding factor by Eg2 regulates translation of c-Mos mRNA. Nature 404: 302-307.

SOURCE

Mos^{xe} (R38.1) is a mouse monoclonal antibody raised against maltose binding protein-*Xenopus* Mos fusion protein.

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.

STORAGE

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

APPLICATIONS

Mos^{xe} (R38.1) is recommended for detection of Mos p39 of *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of Mos^{xe}: 37 kDa.

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.

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.