



Maskin (xA-14): sc-27045

BACKGROUND

Maskin is a 150 kDa protein that helps modulate the translation of cytoplasmic polyadenylation element (CPE)-containing mRNAs. In immature oocytes of *Xenopus*, the CPE of dormant mRNA is bound to CPE binding protein (CPEB) and Maskin. Maskin then binds eIF-4E, blocking the interaction of eIF-4E and eIF-4G. This prevents the assembly of the 40S ribosomal subunit-containing initiation complex which silences translation. Upon oocyte maturation, CPEB is phosphorylated and poly (A) polymerase is recruited to the mRNA. The maskin-eIF-4E bond is disrupted and, as a result, eIF-4G is free to bind eIF-4E, allowing translation to proceed. Maskin localizes to the cytoplasm and is expressed in *Xenopus* eggs and testis. Specifically, Maskin localizes to the animal pole of stage 5-6 oocytes.

REFERENCES

1. Stebbins-Boaz, B., Cao, Q., de Moor, C.H., Mendez, R., and Richter, J.D. 1999. Maskin is a CPEB-associated factor that transiently interacts with eIF-4E. *Mol. Cell* 4: 1017-1027.
2. Groisman, I., Huang, Y.S., Mendez, R., Cao, Q., Theurkauf, W., and Richter, J.D. 2000. CPEB, maskin, and cyclin B1 mRNA at the mitotic apparatus: implications for local translational control of cell division. *Cell* 103: 435-447.
3. Hodgman, R., Tay, J., Mendez, R., and Richter, J.D. 2001. CPEB phosphorylation and cytoplasmic polyadenylation are catalyzed by the kinase IAK1/Eg2 in maturing mouse oocytes. *Development* 128: 2815-2822.
4. Cao, Q. and Richter, J.D. 2002. Dissolution of the maskin-eIF4E complex by cytoplasmic polyadenylation and poly(A)-binding protein controls cyclin B1 mRNA translation and oocyte maturation. *EMBO J.* 21: 3852-3862.
5. Groisman, I., Jung, M.Y., Sarkissian, M., Cao, Q., and Richter, J.D. 2002. Translational control of the embryonic cell cycle. *Cell* 109: 473-483.

SOURCE

Maskin (xA-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Maskin of *Xenopus laevis* 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-27045 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Maskin (xA-14) is recommended for detection of Maskin of *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Molecular Weight of Maskin: 150 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.