



Maskin (xC-14): sc-27046

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 (xC-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-27046 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.

RESEARCH USE

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

PROTOCOLS

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

APPLICATIONS

Maskin (xC-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.