SANTA CRUZ BIOTECHNOLOGY, INC.

Emi1 (N-16): sc-23267

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Emi1 (for early mitotic inhibitor) regulates mitosis by inhibiting the anaphase promoting complex/cyclosome (APC). Emi1 is a conserved F box protein containing a zinc binding region essential for APC inhibition. Human Emi1 is similar to *Xenopus laevis* Emi1, which inhibits the APC (Cdc20) ubiquitination complex to allow accumulation of cyclin B. Human Emi1 (hEmi1) functions to promote cyclin A accumulation and S phase entry in somatic cells by inhibiting the APC complex. At the G_1-S transition, hEmi1 is transcriptionally induced by the E2F transcription factor. hEmi1 overexpression accelerates S phase entry and can override a G_1 block caused by overexpression of Cdh1 or the E2F-inhibitor p105 retinoblastoma protein (pRb). Depleting cells of hEmi1 through RNA interference prevents accumulation of cyclin A and inhibits S phase entry. Emi1 is required to arrest unfertilized eggs at meta-phase of meiosis II and may be the long-sought mediator of CSF activity. Human Emi1 is similar to *Xenopus laevis* Emi1, which inhibits the APC (Cdc20) ubiquitination complex to allow accumulation of cyclin B.

REFERENCES

1. Reimann, J.D., et al. 2001. Emi1 is a mitotic regulator that interacts with Cdc20 and inhibits the anaphase promoting complex. Cell 105: 645-655.
2. Reimann, J.D., et al. 2001. Emi1 regulates the anaphase-promoting complex by a different mechanism than Mad2 proteins. Genes Dev. 15: 3278-3285.
3. Hsu, J.Y., et al. 2002. E2F-dependent accumulation of hEmi1 regulates S phase entry by inhibiting APC (Cdh1). Nat. Cell Biol. 4: 358-366.
4. Reimann, J.D., et al. 2002. Emi1 is required for cytostatic factor arrest in vertebrate eggs. Nature 416: 850-854.
5. LocusLink Report (LocusID: 26271). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: FBXO5 (human) mapping to 6q25.2.

SOURCE

Emi1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Emi1 of human 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-23267 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

Emi1 (N-16) is recommended for detection of Emi1 of 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).

Suitable for use as control antibody for Emi1 siRNA (h): sc-37611, Emi1 shRNA Plasmid (h): sc-37611-SH and Emi1 shRNA (h) Lentiviral Particles: sc-37611-V.

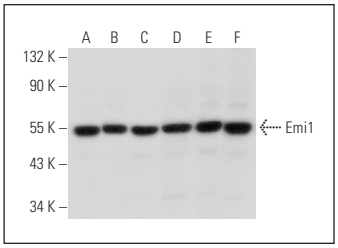
Molecular Weight of Emi1: 56 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HEK293 whole cell lysate: sc-45136 or JAR cell lysate: sc-2276.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Emi1 (N-16): sc-23267. Western blot analysis of Emi1 expression in Hep G2 (**A**), HEK293 (**B**), JAR (**C**), A549 (**D**) and JEG-3 (**E**) whole cell lysates and HeLa nuclear extract (**F**).

RESEARCH USE

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