

Emi1 (H-300): sc-30182

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. The Emi1 protein functions to promote cyclin A accumulation and S phase entry in somatic cells by inhibiting the APC complex. At the G1-S transition, Emi1 is transcriptionally induced by the E2F transcription factor. Emi1 overexpression accelerates S phase entry and can override a G1 block caused by overexpression of Cdh1 or the E2F-inhibitor p105 retinoblastoma protein (pRb). Depleting cells of Emi1 through RNA interference prevents accumulation of cyclin A and inhibits S phase entry. Emi1 is required to arrest unfertilized eggs at metaphase 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

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- Chiaur, DS., et al. 2000. Five human genes encoding F-box proteins: chromosome mapping and analysis in human tumors. *Cytogenet. Cell Genet.* 88: 255-258.
- 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.
- Reimann, J.D., et al. 2001. Emi1 regulates the anaphase-promoting complex by a different mechanism than Mad2 proteins. *Genes Dev.* 15: 3278-3285.
- Jin, J., et al. 2004. Systematic analysis and nomenclature of mammalian F-box proteins. *Genes Dev.* 18: 2573-2580.
- Eldridge, A.G., et al. 2006. The *evi5* oncogene regulates cyclin accumulation by stabilizing the anaphase-promoting complex inhibitor *emi1*. *Cell* 124: 367-380.
- Lee, H., et al. 2006. Mouse *emi1* has an essential function in mitotic progression during early embryogenesis. *Mol. Cell. Biol.* 26: 5373-5381.

CHROMOSOMAL LOCATION

Genetic locus: FBX05 (human) mapping to 6q25.2; Fbxo5 (mouse) mapping to 10 A1.

SOURCE

Emi1 (H-300) is a rabbit polyclonal antibody raised against amino acids 148-447 mapping at the C-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.

STORAGE

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

APPLICATIONS

Emi1 (H-300) is recommended for detection of Emi1 of human and, to a lesser extent, mouse and rat 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 siRNA (m): sc-44344, Emi1 shRNA Plasmid (h): sc-37611-SH, Emi1 shRNA Plasmid (m): sc-44344-SH, Emi1 shRNA (h) Lentiviral Particles: sc-37611-V and Emi1 shRNA (m) Lentiviral Particles: sc-44344-V.

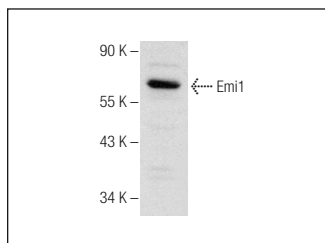
Molecular Weight of Emi1: 56 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Emi1 (H-300): sc-30182. Western blot analysis of Emi1 expression in K-562 whole cell lysate.

RESEARCH USE

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

MONOS
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Try **Emi1 (B-3): sc-365212**, our highly recommended monoclonal alternative to Emi1 (H-300).