

# Emi1 (B-3): sc-365212

## 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 G<sub>1</sub>-S transition, Emi1 is transcriptionally induced by the E2F transcription factor. Emi1 overexpression accelerates S phase entry and can override a G<sub>1</sub> 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.

## CHROMOSOMAL LOCATION

Genetic locus: FBXO5 (human) mapping to 6q25.2; Fbxo5 (mouse) mapping to 10 A1.

## SOURCE

Emi1 (B-3) is a mouse monoclonal antibody raised against amino acids 148-447 mapping at the C-terminus of Emi1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Emi1 (B-3) is available conjugated to agarose (sc-365212 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365212 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365212 PE), fluorescein (sc-365212 FITC), Alexa Fluor® 488 (sc-365212 AF488), Alexa Fluor® 546 (sc-365212 AF546), Alexa Fluor® 594 (sc-365212 AF594) or Alexa Fluor® 647 (sc-365212 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365212 AF680) or Alexa Fluor® 790 (sc-365212 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Emi1 (B-3) is recommended for detection of Emi1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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.

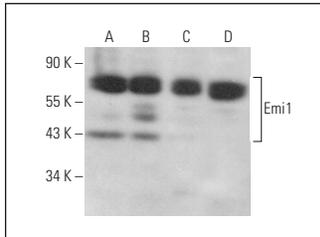
Molecular Weight of Emi1: 56 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, F9 cell lysate: sc-2245 or HEL 92.1.7 cell lysate: sc-2270.

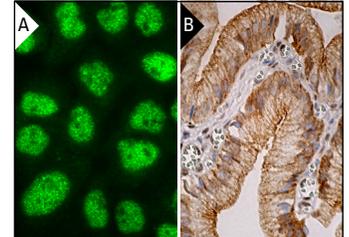
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BPHRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Emi1 (B-3): sc-365212. Western blot analysis of Emi1 expression in K-562 (A), HEL 92.1.7 (B), AT3B-1 (C) and F9 (D) whole cell lysates.



Emi1 (B-3): sc-365212. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Vaidyanathan, S., et al. 2016. *In vivo* overexpression of Emi1 promotes chromosome instability and tumorigenesis. *Oncogene* 35: 5446-5455.
- Ha, K., et al. 2017. The anaphase promoting complex impacts repair choice by protecting ubiquitin signalling at DNA damage sites. *Nat. Commun.* 8: 15751.
- Yang, M., et al. 2019. Inhibition of neddylation causes meiotic arrest in mouse oocyte. *Cell Cycle* 18: 1254-1267.
- Malacrida, A., et al. 2021. Rigosertib and cholangiocarcinoma: a cell cycle affair. *Int. J. Mol. Sci.* 23: 213.
- Paul, D., et al. 2022. Revealing β-TrCP activity dynamics in live cells with a genetically encoded biosensor. *Nat. Commun.* 13: 6364.

## 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.

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