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EMI1 (Early Mitotic Inhibitor-1) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone EMI1/1176]
Catalog # AH11284

Product Information

Application	WB, IHC, IF, FC
Primary Accession	Q9UKT4
Other Accession	26271, 520506
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2a, kappa
Clone Names	EMI1/1176
Calculated MW	50146

Additional Information

Gene ID	26271
Other Names	F-box only protein 5, Early mitotic inhibitor 1, FBXO5, EMI1, FBX5
Application Note	WB~~1:1000 IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	EMI1 (Early Mitotic Inhibitor-1) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FBXO5 (HGNC:13584)
Function	Regulator of APC activity during mitotic and meiotic cell cycle (PubMed:16921029, PubMed:17234884, PubMed:17485488, PubMed:17875940, PubMed:23708001, PubMed:23708605). During mitotic cell cycle plays a role as both substrate and inhibitor of APC-FZR1 complex (PubMed:16921029, PubMed:17234884, PubMed:17485488, PubMed:17875940, PubMed:23708001, PubMed:23708605, PubMed:29875408). During G1 phase, plays a role as substrate of APC-FZR1 complex E3 ligase (PubMed:29875408). Then switches as an inhibitor of APC-FZR1 complex during S and G2 leading to cell-cycle commitment (PubMed:29875408). As APC inhibitor, prevents the degradation of APC substrates at multiple levels: by interacting with APC and blocking access of APC substrates to the D-box coreceptor, formed by FZR1 and ANAPC10; by suppressing ubiquitin ligation and chain elongation by APC by preventing the

	UBE2C and UBE2S activities (PubMed:16921029, PubMed:23708001, PubMed:23708605). Plays a role in genome integrity preservation by coordinating DNA replication with mitosis through APC inhibition in interphase to stabilize CCNA2 and GMNN in order to promote mitosis and prevent rereplication and DNA damage-induced cellular senescence (PubMed:17234884, PubMed:17485488, PubMed:17875940). During oocyte maturation, plays a role in meiosis through inactivation of APC-FZR1 complex. Inhibits APC through RPS6KA2 interaction that increases FBXO5 affiniy for CDC20 leading to the metaphase arrest of the second meiotic division before fertilization (By similarity). Controls entry into the first meiotic division through inactivation of APC-FZR1 complex (By similarity). Promotes migration and osteogenic differentiation of mesenchymal stem cells (PubMed:29850565).
Cellular Location	Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Note=In interphase, localizes in a punctate manner in the nucleus and cytoplasm with some perinuclear concentration (PubMed:11988738). In mitotic cells, localizes throughout the cell, particularly at the spindle (PubMed:15469984)

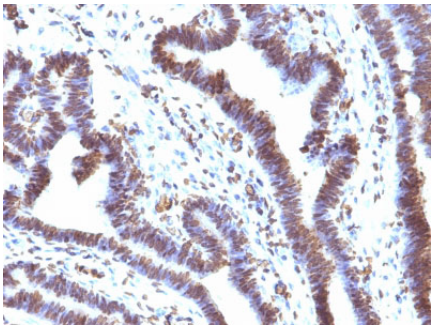
Background

It recognizes a 56kDa protein, which is identified as Early Mitotic Inhibitor-1 (EMI1). It 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.

References

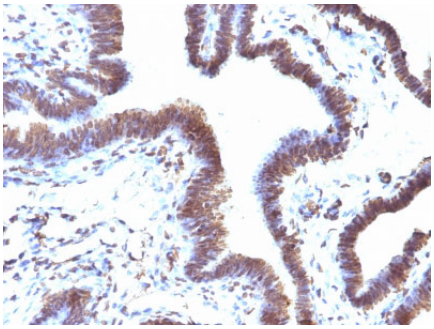
Reimann, J.D., et al. 2001. Emi1 is a mitotic regulator that interacts with Cdc20 and inhibits the anaphase promoting complex. Cell 105: 645-655. |

Images



Formalin-fixed, paraffin-embedded human Ovarian Carcinoma stained with EMI1 Monoclonal Antibody (EMI1/1176).

Formalin-fixed, paraffin-embedded human Ovarian carcinoma stained with EMI1 Monoclonal Antibody (EMI1/1176).



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.