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# Emi1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55632

## Product Information

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| **Application** | IHC-P, IHC-F, IF, ICC, E |
| **Primary Accession** | Q9UKT4 |
| **Reactivity** | Rat, Pig, Dog, Bovine |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 50146 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human Emi1 |
| **Epitope Specificity** | 101-200/447 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Nucleus. Cytoplasm. Cytoplasm > cytoskeleton > spindle. In interphase, localizes in a punctate manner in the nucleus and cytoplasm with some perinuclear concentration. In mitotic cells, localizes throughout the cell, particularly at the spindle. |
| **SIMILARITY** | Contains 1 F-box domain. Contains 1 IBR-type zinc finger. |
| **Post-translational modifications** | Phosphorylation by CDK2 and subsequently by PLK1 triggers degradation during early mitosis through ubiquitin-mediated proteolysis by the SCF ubiquitin ligase complex containing the F-box protein BTRC. This degradation is necessary for the activation of APC in late mitosis and subsequent mitotic progression. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | This gene encodes a member of the F-box protein family which is characterized by an approximately 40 amino acid motif, the F-box. The F-box proteins constitute one of the four subunits of the ubiquitin protein ligase complex called SCFs (SKP1-cullin-F-box), which function in phosphorylation-dependent ubiquitination. The F-box proteins are divided into 3 classes: Fbws containing WD-40 domains, Fbls containing leucine-rich repeats, and Fbxs containing either different protein-protein interaction modules or no recognizable motifs. The protein encoded by this gene belongs to the Fbxs class. This protein is similar to xenopus early mitotic inhibitor-1 (Emi1), which is a mitotic regulator that interacts with Cdc20 and inhibits the anaphase promoting complex. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Dec 2008] |

## Additional Information

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| **Gene ID** | 26271 |

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| **Other Names** | F-box only protein 5, Early mitotic inhibitor 1, FBXO5 (HGNC:13584) |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **Format** | 0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **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) |