

#### DESCRIPTION

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| <b>Species Reactivity</b>                                                                                                                                                                               | Human/Mouse/Rat                                                                                                                                                                                |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human, mouse, and rat CDC25A in direct ELISAs and Western blots. In direct ELISA and Western blots, this antibody does not cross-react with recombinant human (rh) CDC25B or rhCDC25C. |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>2B</sub> Clone # 336445                                                                                                                                              |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                                                                                                                     |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human CDC25A<br>Glu2-Leu523<br>Accession # AAA58415                                                                                                        |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                                                                                                   |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                                                                                                                |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

Cell Division Cycle 25A (CDC25A) phosphatase removes inorganic phosphate groups covalently attached to tyrosine, serine and threonine residues in proteins (1). Overexpression of CDC25A in small mammary carcinomas has been associated with a poor patient survival prognosis (2). Levels of CDC25A activity are highest in S phase of the cell cycle, where it is suspected to be involved in "checkpoint" control of cell cycle progression (3). Induction of DNA damage with ultraviolet or ionizing radiation causes an increase in CDC25A ubiquitylation and proteosomal degradation, leading to cell cycle block between G1 and S phases (4). One of its major substrates, the kinase CDC2, is activated by dephosphorylation (5). Recombinant CDC25A is truncated to remove the N-terminal regulatory domains and is fully active.

#### PRODUCT SPECIFIC NOTICES

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