

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                     |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human Cyclin E1 in direct ELISAs and Western blots.                               |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                      |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                 |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human Cyclin E1<br>Met16-Lys143<br>Accession # P24864 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 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

Cyclin E1 (also known as G1/S-specific cyclin-E1 and CCNE1) is a 48-58 kDa member of the cyclin E subfamily, cyclin family of molecules. It associates with Cdk2 kinase, and determines substrate specificity for the complex. This complex phosphorylates multiple substrates involved in cell cycle progression and the initiation of DNA replication. Cyclin E1 is required for G1/S phase progression and cell cycle reentry from G0 phase. Its reduced activity during cellular senescence contributes to G1 arrest. Human cyclin E1 is 410 amino acids (aa) in length. It contains two cyclin box folds (aa 144-234 and 293-363) and is phosphorylated on at least eight Ser/Thr sites. There are at least two alternate splice forms. One is 40-41 kDa in size and utilizes an alternate start site at Met46, while a second is 43-44 kDa in size and shows a deletion of aa 154-196. One other potential start site exists at Met16. There are multiple proteolytic cleavage products that are tumor-associated and show increased destabilizing activity. Cleavage around Gln40 generates 44-45 kDa C-terminal fragments, while cleavage between Ala69Asp70 generates 33-35 kDa C-terminal fragments. Over aa 16-143, human cyclin E1 shares 67% aa identity with mouse cyclin E1.

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