

## Cyclin E. Mouse cIn 168 Monoclonal Antibody, Human, Monkey

### BACKGROUND

Human cyclin E was originally identified by complementation of a triple cIn deletion in *Saccharomyces cerevisiae*. Following the identification of human cyclin E protein, researchers found that breast cancers and some other solid tumors exhibited both quantitative and qualitative alterations in cyclin E protein production. In particular, the alterations in cyclin E expression in breast cancer correlated with increasing stage and grade of the tumor. These results suggested that cyclin E might be useful as a prognostic marker. More recently, Geng et al generated a mouse strain in which the coding sequences for cyclin D1 was deleted and replaced with those of human cyclin E. Replacement of cyclin D1 with cyclin E rescued all phenotypic manifestations seen in the cyclin D1 deficient mice and restored normal development to cyclin D1-dependent tissues. Based on the results of these studies, it appears that cyclin E is the major downstream target of cyclin D1.

In addition to functioning downstream of cyclin D1, recent studies with *Xenopus* egg extracts demonstrated that cyclin E localizes to the centrosome. In these studies CDK2-cyclin E activity was shown to be required for centrosome duplication during S phase. Taken together, these data suggest a mechanism that coordinates centrosome reproduction with cycles of DNA synthesis and mitosis.

### IMMUNOGEN

Recombinant full-length human cyclin E protein

### COMMENTS

Antibody detects human cyclin E protein by Western blot. Detects a 50 kDa band.

### STORAGE CUSTOMER

Product should be stored at -20 degrees C. Aliquot to avoid freeze/thaw cycles

### STABILITY

Products are stable for one year from purchase when stored properly

### ORDERING INFORMATION

**CATALOG NUMBER**  
C115M

**SIZE**  
100 µg

**FORM**  
Purified

**HOST/CLONE**  
Mouse cIn 168

**FORMULATION**  
Provided as 0.2 µm sterile filtered solution in phosphate buffered saline with 0.08% sodium azide

**CONCENTRATION**  
1 mg/ml

**ISOTYPE**  
IgG2a

**APPLICATIONS**  
Immunoprecipitation  
Western Blotting

### SPECIES REACTIVITY

Human, Monkey

**POSITIVE CONTROL**

Not Available

**SHIP CONDITIONS**

Ship at ambient temperature, freeze upon arrival

**REFERENCES**

1. Koff, A., et al. "Human cyclin E, a new cyclin that interacts with two members of the CDC2 gene family." *Cell* 1991, 66, 1217-1228.
2. Keyomarsi, K., et al. "Cyclin E, a potential prognostic marker for breast cancer." *Cancer Res.* 1994, 54, 380-385.
3. Geng, Y., et al. "Rescue of cyclin D1 deficiency by knockin cyclin E." *Cell* 1999, 97, 767-777.
4. Hinchcliffe, E.H., et al. "Requirement of Cdk2-cyclin E activity for repeated centrosome reproduction in *Xenopus* egg extracts." *Science* 1999, 283, 851-854.

**LAST MODIFIED** 9/16/2002