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ProductInformation

Anti-phospho-Retinoblastoma (Rb)
(phosphoserine 807/811)
Developed in Rabbit,
Affinity Isolated Antibody

Product Number **R 6400**

Product Description

Anti-phospho-Retinoblastoma (Rb) (phosphoserine 807/811) is developed in rabbit using a synthetic phospho-Rb peptide corresponding to residues around Ser807/Ser811 of human Rb and conjugated to KLH, as immunogen. The antibody is affinity-purified using the protein A and peptide affinity chromatography.

Anti-phospho-Retinoblastoma (Rb) (phosphoserine 807/811) detects Rb only when phosphorylated at Ser807/Ser811. The antibody reacts with human, rat, and mouse and may be used for immunoblotting.

The retinoblastoma tumor supressor protein, Rb, regulates cell proliferation by controlling progression through the restriction point within the G1 phase of the cell cycle.[1] Rb has three functionally distinct binding domains and interacts with critical regulatory proteins including the E2F family of transcription factors, c-Abl tyrosine kinase and proteins with a conserved LXCXE motif.[2-4] Cell cycle-dependent phosphorylation by cdks controls Rb activity by preventing binding to these regulatory targets.[5] Although the identity of the kinases phosphorylating specific Rb sites *in vivo* is still in question, Rb can be phosphorylated at a multiplicity of sites *in vitro* by cdc2, cdk2 and cdk4/cdk6 kinase complexes.[6-9] Differential phosphorylation has been shown to modulate Rb function both *in vitro* and *in vivo*.[7-10]

Reagents

Anti-phospho-Retinoblastoma (Rb) (phosphoserine 807/811) is supplied as an affinity-isolated antibody in 10 mM sodium HEPES, pH 7.5, containing 150 mM sodium chloride, 100 µg/ml bovine serum albumin and 50% glycerol.

Storage/Stability

Store at 0 °C to –20 °C. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Recommended working dilution is 1:1,000 for immunoblotting (chemiluminescent) using an extract of human fibroblasts synchronized by serum deprivation. For immunoblotting, incubate membrane with diluted antibody in 5% bovine serum albumin (BSA), 1X Tris buffered saline and 0.1% Tween-20 at 2-8 °C with gentle shaking, overnight.

In order to obtain best results in different techniques and preparations we recommend determining optimal working dilution by titration test.

References

1. Sherr, C. J., Science, **274**, 1672-1677 (1996).
2. Nevins, J. R. et al., Science, **258**, 424-429 (1992).
3. Welch, P. J. and Wang, J. Y., Cell, **75** 779-790 (1993).
4. Hu, Q. J., et al., EMBO Journal, **9**, 1147-1155 (1990).
5. Knudsen, E. S. and Wang, J. Y. J., Mol. Cell Bio., **17**, 5771-5783 (1997).
6. Knudsen, E. S. and Wang, J. Y. J., J. Biol. Chem., **271**, 8313-8320 (1996).

7. Zarkowska, T. and Mittnoch, S., J. Biol. Chem., **272**, 12738-12746 (1997).
8. Kitagawa, M. et al., EMBO Journal, **15**, 7060-7069 (1996).
9. Connell-Crowley, L., et al., Mol. Cell Bio. **8**, 287-301 (1997).
10. Lundberg, A. S. and Weinberg, R. A. Mol. Cell Bio., **18**, 753-761 (1998).

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