

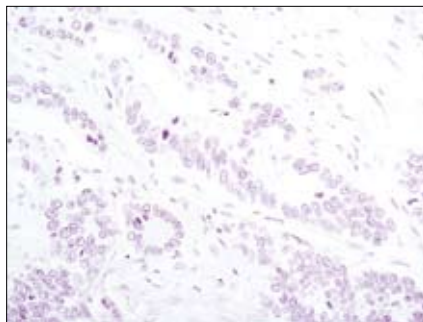
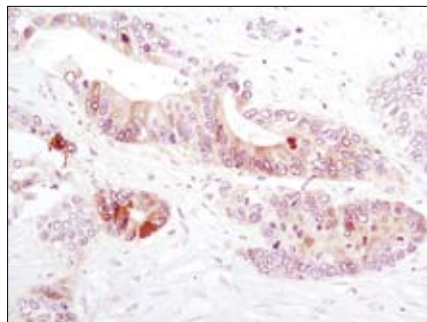
Phospho-4E-BP1 (Thr37/46) Blocking Peptide

✓ 100 µg
(100 sections)

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Immunohistochemical analysis of paraffin-embedded human colon carcinoma using Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb #2855 in the presence of control peptide (left) or Phospho-4E-BP1 (Thr37/46) Blocking Peptide (right).

Background: When bound to eIF4E, 4E-BP1 (also known as PHAS-1) inhibits cap-dependent translation. Upon hyperphosphorylation of 4E-BP1 this interaction is disrupted and cap-dependent translation is activated (1). Both the PI3 kinase/Akt pathway and FRAP/mTOR kinase regulate 4E-BP1 activity (2,3). Multiple 4E-BP1 residues are phosphorylated *in vivo* (4); while phosphorylation by FRAP/mTOR on Thr37 and Thr46 does not prevent the binding of 4E-BP1 to eIF4E, it is thought to prime 4E-BP1 for subsequent phosphorylation at Ser65 and Thr70 (5).

Description: This peptide is used to block Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb #2855 reactivity.

Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb #2855 signal in immunohistochemistry and both Phospho-4E-BP1 (Thr37/46) (236B4) Rabbit mAb #2855 and Phospho-4E-BP1 (Thr37/46) Antibody #9459 in Western blotting.

Directions for Use: For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. For Western blotting, add an equal volume of peptide as volume of antibody used in 10 ml total volume, and incubate at room temperature for 30 minutes before allowing to react with the blot. Recommended antibody dilutions can be found on the product data sheet.

Applications: Use as a blocking reagent to evaluate the specificity of antibody reactivity in Western blotting and immunohistochemistry protocols.

Background References:

- (1) Pause, A. et al. (1994) *Nature* 371, 762–767.
- (2) Brunn, G.J. et al. (1997) *Science* 277, 99–101.
- (3) Gingras, A.C. et al. (1998) *Genes Dev.* 12, 502–513.
- (4) Fadden, P. et al. (1997) *J. Biol. Chem.* 272, 10240–10247.
- (5) Gingras, A.C. et al. (1999) *Genes Dev.* 13, 1422–1437.

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at -20°C.

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