

phospho-Arp2 (Thr-237/Thr-238) Peptide

Cat. # AX3875

Size 50 µg

Background:

Cellular morphology, adhesion, and motility occur through dynamic reorganization of actin-based superstructures. Actin-binding proteins are critical for regulating actin polymerization and superstructure formation. The Arp2/3 complex is an actin polymerization-inducing complex that includes Arp2, Arp3, p41-Arc, p34-Arc, p21-Arc, p20-Arc, and p16-Arc. Several nucleation promoting factors, such as WASP and coronin, regulate the activity of the Arp2/3 complex. In addition, the Arp2/3 complex may be regulated by phosphorylation of specific subunits in the complex. Arp2 has two phosphosites, Thr-237 and Thr-238, that are evolutionarily conserved, and are phosphorylated along with Tyr-202 in response to growth factor stimulation. These phosphorylation events may regulate binding to the pointed end of actin filaments, and alanine substitutions of these Arp2 phosphosites inhibits membrane protrusions. Thus, phosphorylation may be another mode of Arp2/3 complex regulation in addition to the activity of nucleation-promoting factors.

References

Kelleher, J.F. et al. (1995). J Cell Biol. 131(2):385.
LeClaire, L.L. et al (2008). J Cell Biol. 182(4):647.
Soderling, S.H. (2009). Sci Signal. 2(55):pe5 (Review).

Peptide Sequence:

Phospho-Arp2 (Thr-237/Thr-238) synthetic peptide corresponding to amino acid residues surrounding threonine 237 and threonine 238 in human Arp2. This peptide sequence is highly conserved in rat, mouse, chicken, and fish Arp2 proteins.

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.
Store at -20°C. Stable for 1 year.

Applications:

Blocking 1:1000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

The peptide is specifically recognized by Arp2 (Thr-237/Thr-238) phospho-specific antibody (AP3871) in ELISA, and has been shown to block the reactivity of AP3871 in Western blot. In addition, the peptide is recommended for use in blocking AP3871 reactivity in immunocytochemistry.

Related Products:

AP3871 Arp2 (Thr-237/Thr-238), phospho-specific Rabbit Polyclonal
AP3861 Arp2 (C-terminal region) Rabbit Polyclonal
AK6060 Actin & Tubulin Antibody Sampler Kit
AP1671 Actin (Tyr-53), phospho-specific Rabbit Polyclonal
WK6110 N-WASP Phospho-Regulation Antibody Sampler Kit
CK6180 Coronin-1B Phospho-Regulation Antibody Sampler Kit

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