

phospho-p130 Cas (Tyr-751) Blocking Peptide

Cat. # **PX1585**
Size **50 µg**

Background:

p130 Cas (Crk-associated substrate (CAS), breast cancer antiestrogen resistance 1 (BCAR1)) is a docking protein containing multiple protein-protein interaction domains. The amino-terminal SH3 domain may function as a molecular switch regulating CAS tyrosine phosphorylation, as it interacts with focal adhesion kinase (FAK) and the FAK-related kinase PYK2, as well as with the tyrosine phosphatases PTP-1B and PTP-PEST. The carboxy-terminal Src binding domain (SBD) contains a proline-rich motif that mediates interaction with the SH3 domains of Src-family kinases (SFKs) and a tyrosine phosphorylation site (Tyr-762 in rat or Tyr-668 in mouse p130 Cas) that can promote interaction with the SH2 domain of SFKs. The p130 Cas central substrate domain, the major region of tyrosine phosphorylation, is characterized by 15 tyrosines present in Tyr-X-X-Pro (YXXP) motifs, including Tyr-165, Tyr-249, and Tyr-410. When phosphorylated, most YXXP motifs are able to serve as docking sites for proteins with SH2 or PTB domains, including the adaptors Crk and Nck. In addition, phosphorylation of Tyr-751 (Tyr-657 in human) near the C-terminal caspase recognition site can attenuate caspase cleavage. Dephosphorylation of this site occurs during apoptosis, and may facilitate p130 Cas degradation.

References:

Nakamoto, T. et al. (1996) J Biol Chem. 271(15):8959.
Pellicena, P. & Miller, W.T. (2001) J Biol Chem. 276 (30):28190.
Kim, D.H. et al. (2003). Biochem Biophys Res Comm. 300:141.
Shin, N-Y et al. (2004). J Biol Chem. 279(37):38331.

Peptide Sequence:

Phospho-p130 Cas (Tyr-751) synthetic peptide corresponds to amino acid residues around tyrosine 751 in rat p130 Cas. This rat sequence is the same as Tyr-653 in human p130 Cas and Tyr-653 in mouse p130 Cas. This site is not conserved in other Cas family members.

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:

Antibody Blocking 1 µg/ml¹
ELISA 10-100 ng/well²

End user should determine optimal concentration dependent on the concentration of the antibody.

¹Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.

²Established 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 anti-p130 Cas (Tyr-751) phospho-specific antibody (PP1581) in ELISA, and has been shown to block the reactivity of PP1581 during Western blot. In addition, the peptide is recommended for use in blocking PP1581 reactivity in immunocytochemistry.

Related Products:

PP1451 p130 Cas (Tyr-762), phospho-specific Rabbit Polyclonal
PP1581 p130 Cas (Tyr-751), phospho-specific Rabbit Polyclonal

PX1455 phospho-p130 Cas (Tyr-762) Peptide

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