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#4014

Phospho-p130 Cas (Tyr249) Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 130	Source/Isotype: Rabbit	UniProt ID: #P56945	Entrez-Gene Id: 9564
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-p130 Cas (Tyr249) Antibody detects endogenous levels of p130 Cas only when phosphorylated at tyrosine 249. The antibody may cross-react with other phosphorylated tyrosines in the substrate domain of p130 Cas.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr249 of human p130Cas. Antibodies are purified by protein A and peptide affinity chromatography.

Background

p130 Cas (Crk-associated substrate) 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) (1) and the FAK-related kinase PYK2 (2), as well as the tyrosine phosphatases PTP-1B (3) and PTP-PEST (4). 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 (Tyr668 and/or Tyr670) that can promote interaction with the SH2 domain of SFKs (5). 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 Tyr165, 249, and 410. When phosphorylated, most YXXP motifs are able to serve as docking sites for proteins with SH2 or PTB domains including adaptors, C-Crk, Nck, and inositol 5'-phosphatase 2 (SHIP2) (6). The tyrosine phosphorylation of p130 Cas has been implicated as a key signaling step in integrin control of normal cellular behaviors including motility, proliferation, and survival. Aberrant Cas tyrosine phosphorylation may contribute to cell transformation by certain oncoproteins (5).

Background References

1. Polte, T.R. and Hanks, S.K. (1997) *J Biol Chem* 272, 5501-9.
2. Astier, A. et al. (1997) *J Biol Chem* 272, 228-32.
3. Liu, F. et al. (1996) *J Biol Chem* 271, 31290-5.
4. Garton, A.J. et al. (1997) *Oncogene* 15, 877-85.
5. Ruest, P.J. et al. (2001) *Mol Cell Biol* 21, 7641-52.
6. Bouton, A.H. et al. (2001) *Oncogene* 20, 6448-58.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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