

Phospho-p130 Cas (Tyr410) Antibody

✓ 100 µl
(10 Western mini-blot)

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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Entrez-Gene ID # P56945
Swiss-Prot Acc. # 9564

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R	130 kDa	Rabbit**

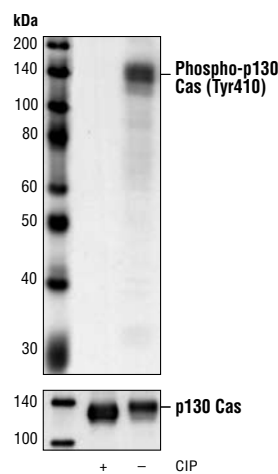
Background: p130 Cas (Crk-associated substrate) is a docking protein containing multiple protein-protein interaction domains. The amino-terminal SH3 domain can function as a molecular switch regulating CAS tyrosine phosphorylation, as it interacts with focal adhesion kinase (FAK) (1) and the FAK-related kinase PYK2 (2), as well as with 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.

Specificity/Sensitivity: Phospho-p130 Cas (Tyr410) Antibody detects endogenous levels of p130 Cas only when phosphorylated at tyrosine 410. The antibody may cross-react with other phosphorylated tyrosines in the substrate domain of p130 Cas and paxillin. The antibody may cross-react with phosphorylated PDGFR.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Tyr410 of human p130 Cas. Antibodies are purified by protein A and peptide affinity chromatography.

Selected Application References:

Fonseca, P.M. et al. (2004) Regulation and localization of CAS substrate domain tyrosine phosphorylation. *Cellular Signalling* 16 (5), 621–629. Applications: W, IC-IF.



Western blot analysis of extracts from NIH/3T3 cells, untreated or calf intestinal phosphatase (CIP)-treated using Phospho-p130Cas (Tyr410) Antibody (upper) or p130Cas antibody (lower).

Background References:

- (1) Polte, T.R. et al. (1997) *J. Biol. Chem.* 272, 5501–5509.
- (2) Astier, A. et al. (1997) *J. Biol. Chem.* 272, 228–232.
- (3) Liu, F. et al. (1996) *J. Biol. Chem.* 271, 31290–31295.
- (4) Garton, A.J. et al. (1997) *Oncogene* 15, 877–885.
- (5) Ruest, P.J. et al. (2001) *Mol. Cell. Biol.* 21, 7641–7652.
- (6) Bouton, A.H. et al. (2001) *Oncogene* 20, 6448–6458.

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.

*Species cross-reactivity is determined by Western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western Blotting 1:1000
Immunoprecipitation 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Companion Products:

Phospho-p130 Cas (Tyr249) Antibody #4014
Phospho-p130 Cas (Tyr165) Antibody #4015
Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
Anti-rabbit IgG, HRP-linked Antibody #7074
Prestained Protein Marker, Broad Range (Premixed Format) #7720
Biotinylated Protein Ladder #7727
20X LumiGLO® Reagent and 20X Peroxide #7003

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.