

Ras Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk, Dm, Sc (C, Hm, X, Z)	21 kDa	Rabbit**

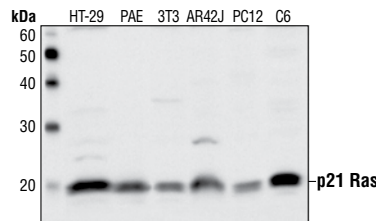
Background: The 21 kDa guanine-nucleotide binding proteins (K-Ras, H-Ras and N-Ras) cycle between active (GTP-bound) and inactive (GDP-bound) forms (1). Receptor tyrosine kinases and G-protein-coupled receptors activate Ras, which then stimulates the Raf-MEK-MAPK pathway (2-4). GTPase-activating proteins (GAP) normally facilitate the inactivation of Ras. However, in 30% of human tumors, point mutations in Ras prevent the GAP-mediated inhibition of this pathway (5). The most common oncogenic Ras mutation found in tumors is Gly12 to Asp (G12D), which prevents Ras inactivation, possibly by increasing the overall rigidity of the protein (5,6).

Specificity/Sensitivity: Ras Antibody detects endogenous levels of total K-Ras, H-Ras, and N-Ras. This antibody may also cross-react with R-Ras and M-Ras.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues close to the amino-terminus of human K-Ras. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Boguski, M.S. and McCormick, F. (1993) *Nature* 366, 643-654.
- (2) Avruch, J. et al. (1994) *Trends Biochem. Sci.* 19, 279-283.
- (3) Buday, L. and Downward, J. (1993) *Cell* 73, 611-620.
- (4) Huang, D.C. et al. (1993) *Mol. Cell Biol.* 13, 2420-2431.
- (5) Bos, J.L. (1989) *Cancer Res.* 49, 4682-4689.
- (6) Ma, J. and Karplus, M. (1997) *J. Mol. Biol.* 274, 114-131.



Western blot analysis of extracts from HT-29, PAE, NIH-3T3, AR42J, PC12 and C6 cell lysates, using Ras Antibody.

Entrez-Gene ID #3265
Swiss-Prot Acc. #P01112

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.

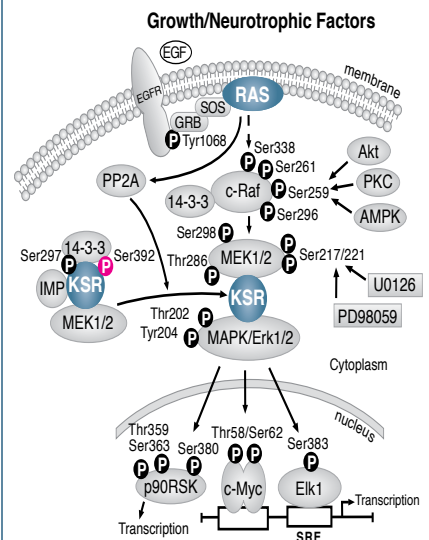
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

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

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—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.