

Ras Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk Dm Pg Sc	Endogenous	21	Rabbit	#P01112, #O14807, #P10301, #P01111, #P01116	3265, 22808, 6237, 4893, 3845

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

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.

Species predicted to react based on 100% sequence homology

Hamster, Chicken, Xenopus, Zebrafish, Dog

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues close to the amino-terminus of human K-Ras. Antibodies are purified by protein A and peptide affinity chromatography.

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 (GAPs) normally facilitate the inactivation of Ras. However, research studies have shown that 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 Asp12 (G12D), which prevents Ras inactivation, possibly by increasing the overall rigidity of the protein (5,6).

Background References

1. Boguski, M.S. and McCormick, F. (1993) *Nature* 366, 643-54.
2. Avruch, J. et al. (1994) *Trends Biochem Sci* 19, 279-83.
3. Buday, L. and Downward, J. (1993) *Cell* 73, 611-20.
4. Huang, D.C. et al. (1993) *Mol Cell Biol* 13, 2420-31.
5. Bos, J.L. (1989) *Cancer Res* 49, 4682-9.
6. Ma, J. and Karplus, M. (1997) *J Mol Biol* 274, 114-31.

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 **Mk:** Monkey **Dm:** D. melanogaster **Pg:** Pig **Sc:** S. cerevisiae

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