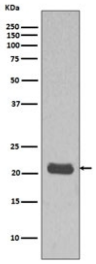
HRAS Antibody BEA-8 / HRas Monoclonal Antibody [clone BEA-8] (RQ4867)

Catalog No.	Formulation	Size
RQ4867	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	BEA-8
Purity	Affinity purified
UniProt	P01112
Applications	Western blot: 1:500-1:2000
Limitations	This HRAS Antibody BEA-8 / HRas Monoclonal Antibody is available for research use only.



HRAS Antibody BEA-8 WB. Western blot testing of human MCF7 cell lysate with HRAS antibody (clone BEA-8). Predicted molecular weight ~21 kDa.

Description

HRAS Antibody BEA-8 / HRas Monoclonal Antibody recognizes HRAS, a member of the classical RAS family of small GTP-binding proteins that regulate intracellular signaling in response to growth factors and other extracellular stimuli. HRAS belongs to the same protein family as KRAS and NRAS, sharing a highly conserved GTPase domain while differing in regions that influence membrane association and intracellular trafficking. Encoded by the HRAS proto-oncogene, this protein functions as a molecular switch that coordinates signaling pathways involved in cell proliferation, differentiation, survival, and cytoskeletal regulation.

HRAS alternates between an inactive GDP-bound state and an active GTP-bound state. Following stimulation of receptor tyrosine kinases, adaptor proteins recruit guanine nucleotide exchange factors such as SOS1, which promote GTP loading and HRAS activation. Active HRAS interacts with downstream effectors, including RAF kinases, initiating the RAF-MEK-ERK signaling cascade. HRAS also engages PI3K and other signaling proteins that influence cellular survival, metabolism, and growth. GTPase-activating proteins accelerate GTP hydrolysis, returning HRAS to its inactive state and helping terminate signaling responses.

Unlike KRAS4B, HRAS undergoes palmitoylation in addition to farnesylation, modifications that regulate its association with cellular membranes. These lipid modifications influence trafficking between the Golgi apparatus and plasma membrane, where HRAS interacts with upstream regulators and downstream effectors. Changes in membrane localization can alter signaling output by affecting the availability of interacting proteins. HRAS also participates in signaling from specialized membrane microdomains, contributing to the spatial organization of RAS-dependent signaling networks.

Activating HRAS mutations occur in several human cancers, including subsets of bladder, head and neck, and thyroid malignancies. Mutations affecting residues such as Gly12, Gly13, and Gln61 can impair normal GTPase regulation and promote persistent downstream signaling. Germline activating variants in HRAS are also associated with Costello syndrome, a developmental disorder characterized by altered growth and increased tumor susceptibility. These findings demonstrate that HRAS activity must be precisely controlled during development and adult tissue maintenance. Although HRAS shares many signaling functions with KRAS and NRAS, differences in membrane trafficking and tissue-specific regulation can produce distinct biological effects. The HRAS Antibody BEA-8 provides a monoclonal reagent for examining HRAS protein expression and its relationship to RAS-dependent signaling, cellular growth regulation, and oncogenic transformation.

For broader research into HRAS function, RAS/MAPK signaling and oncogenic pathway regulation, see our HRAS Antibody page.

Application Notes

Optimal dilution of the HRAS Antibody BEA-8 / HRas Monoclonal Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human HRAS was used as the immunogen for the HRAS antibody.

Storage

Store the HRAS antibody at -20oC.

Alternate Names

H-Ras antibody, Harvey Ras antibody, Harvey rat sarcoma viral oncogene homolog antibody, HRAS proto-oncogene antibody, H-Ras protein antibody, HRAS p21 antibody, Harvey Ras GTPase antibody, HRAS1 antibody

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