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KD-Validated Anti-MRAS Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1072

Product Information

Application	WB, FC
Primary Accession	O14807
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB 2150
Calculated MW	23846
Gene Name	MRAS
Aliases	MRAS; Muscle RAS Oncogene Homolog; RRAS3; R-RAS3; Ras-Related Protein R-Ras3; Ras-Related Protein M-Ras; M-RAs; Muscle And Microspikes RAS; EC 3.6.5.2; M-RAS; NS11
Immunogen	A synthesized peptide derived from human Mras

Additional Information

Gene ID	22808
Other Names	Ras-related protein M-Ras, 3.6.5.2, Ras-related protein R-Ras3, MRAS, RRAS3

Protein Information

Name	MRAS
Synonyms	RRAS3
Function	Signal transducer in the Ras-MAPK signaling pathway that regulates cell proliferation and survival (PubMed:16630891, PubMed:28289718, PubMed:35768504, PubMed:35830882, PubMed:35831509, PubMed:36175670). Core component of the SHOC2-MRAS-PP1c (SMP) holophosphatase complex that regulates the MAPK pathway activation (PubMed:16630891, PubMed:35768504, PubMed:35830882, PubMed:35831509, PubMed:36175670). The formation of the SMP complex only occurs when MRAS is GTP-bound (PubMed:35768504, PubMed:35830882, PubMed:35831509, PubMed:36175670, PubMed:39809765). Unlike other Ras proteins, MRAS has low intrinsic GTPase activity and may require additional factors for activation (PubMed:39809765). The SMP complex specifically dephosphorylates the inhibitory phosphorylation at 'Ser-259' of RAF1 kinase, 'Ser-365' of BRAF kinase and 'Ser-214' of ARAF kinase, stimulating their kinase activities (PubMed:16630891, PubMed:35768504, PubMed:35830882, PubMed:35831509, PubMed:36175670). Recognized by LZTR1 that mediates its ubiquitination by a BCR (BTB-CUL3-RBX1) E3 ubiquitin- protein ligase complex (PubMed:40934300).

Cellular Location	Cell membrane; Lipid-anchor; Cytoplasmic side
Tissue Location	Expression highly restricted to the brain and heart

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