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MRAS Rabbit mAb

Catalog # AP76598

Product Information

Application	WB, IP
Primary Accession	O14807
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	23846

Additional Information

Gene ID	22808
Other Names	MRAS
Dilution	WB~~1:1000 IP~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

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

Background

May serve as an important signal transducer for a novel upstream stimuli in controlling cell proliferation. Weakly activates the MAP kinase pathway.

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