3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

ProductInformation

Monoclonal Anti-Ral-A
Clone RalA5F9.2
produced in mouse, purified immunoglobulin

Catalog Number R8529

Product Description

Monoclonal Anti-Ral-A (mouse IgG1 isotype) is derived from the hybridoma RalA5F9.2 produced by the fusion of mouse myeloma cells (NS1 cells) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 189-203 of human Ral-A, conjugated to KLH. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Ral-A recognizes human, monkey, rat and mouse Ral-A, ~25 kDa. Applications include ELISA, immunoblotting, and immunocytochemistry.

Ral-A and Ral-B are members of the Ras-like GTP binding protein family. This family of proteins shares three characteristics: a molecular weight of between 20 and 30 kDa, the ability to bind GTP or GDP, and a low intrinsic GTPase activity. Ras proteins mediate their diverse biological functions by binding to, and participating in, the activation of multiple downstream targets in intracellular signaling cascades. Recent work has identified nucleotide-exchange factors for Ral-GTPases as the newest members of the set of putative Ras “effector molecules”. Ral-A and Ral-B are widely expressed in tissues during embryogenesis.[1,2] Dominant-negative Ral decreased chemotactic migration in response to basic fibroblast growth factor (bFGF), hepatocyte growth factor (HGF), and insulin-like growth factor 1 (IGF-1).[3] Increased levels of intracellular Ca^{2+} are sufficient for Ral activation in platelets. This activation mechanism correlates with the activation mechanism of the small GTPase Rap1, a putative upstream regulator of Ral guanine nucleotide exchange factors.[4]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~2 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For extended storage, freeze at –20 °C in working aliquots. For continuous use, store at 2-8 °C for up to one month. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/ml is determined using rat brain extract.

Immunocytochemistry: a working concentration of 5-10 µg/ml is determined using HeLa cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Han, H.J., et al., *Cytogenet. Cell Genet*., **73,** 137-139 (1996).
2. Henry, D.O., et al., *Mol. Cell Biol*., **20**, 8084-8092 (2000).
3. Suzuki, J., et al., *Mol. Cell Biol*., **20,** 4658-4665 (2000).
4. Wolthuis, R.M., et al., *Mol. Cell Biol*., **18**, 2486-2491 (1998).

EK,AH,PHC 06/06-1