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Product Information

Monoclonal Anti-Pan-Ras^{Val-12}

Clone DWP

Purified Mouse Immunoglobulin

Product Number **R 3900**

Product Description

Monoclonal Anti-Pan-Ras^{Val-12} (mouse IgG2bκ isotype) is derived from the DWP hybridoma produced by the fusion of Sp2/0 mouse myeloma cells with splenocytes from an immunized BALB/c x C57BL/6 mouse. A synthetic peptide corresponding to amino acids 5-16 of the H, K or N-Ras^{Val-12} was used as immunogen.¹ The antibody is purified using Protein A or Protein G.

Monoclonal Anti-Pan-Ras^{Val-12} reacts specifically with human, mouse, and rat Ras^{Val-12} p21, but not Ras^{Gly-12} or Ras^{Asp-12} p21's. The antibody may be used for immunoblotting, immunoprecipitation and ELISA.

Ras proteins are signal-transducing, guanine nucleotide-binding proteins that appear to function as a branchpoint in signal transduction. Ras coordinates the activity of multiple signaling pathways, regulating diverse cellular functions including cell growth, differentiation and apoptosis.

The human ras gene family consists of three identified members which encode proteins of 21 kDa.² Human c-H-ras and c-K-ras are the cellular homologs of v-H- and v-K-ras originally isolated from Harvey and Kirsten strains of rat sarcoma viruses.²⁻⁴ The third family member is designated c-N-ras.^{5,6}

Normal cellular ras genes are referred to as proto-oncogenes and have the potential for activation to oncogenes by mutations occurring in codons 12, 13 and 61. Such mutated, activated and transforming ras genes have been identified and isolated from human tumors and cultured tumor cells.⁷ Although the expression patterns of ras proto-oncogene proteins in normal human tissues are known,⁸ similar information for activated ras oncogene encoded p21s and their relevance to human disease diagnosis and prognosis remains to be determined.^{9,10}

Reagents

Monoclonal Anti-Pan-Ras^{Val-12} is supplied as 0.1 mg/ml of purified antibody in 0.05 M sodium phosphate buffer, pH 7.5 containing 0.1% sodium azide and 0.2% gelatin.

Precautions and Disclaimer

Due to the sodium azide content a material safety data 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

Store at 2-8 °C. Do not freeze. If slight turbidity develops upon prolonged storage, clarify solution by centrifugation before use.

Product Profile

The recommended concentration for immunoblotting is 5-10 µg/ml using SW480 cells at 10 µg/ml.

The recommended concentration for immunoprecipitation is 1-2 µg/sample. For accurate results in identifying activated Ras proteins in cell extracts or tumor lysates, the Ras proteins must first be immunoprecipitated with broadly reactive anti-Ras reagents such as R3775 or R4025.¹¹⁻¹³

In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimum working dilutions by titration.

References

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