



## Product Information

### MONOCLONAL ANTI-v-H-Ras

#### Clone Y13-259

Purified Rat Immunoglobulin

Product Number **R3775**

### Product Description

Monoclonal Anti-v-H-Ras (Rat IgG1 $\kappa$  isotype) is derived from the Y13-259 hybridoma produced by the fusion of Y3 Ag1.2.3 rat myeloma cells and splenocytes from an immunized rat. Recombinant p21 protein was used as immunogen. The antibody is using Protein G.

Monoclonal Anti-v-H-Ras reacts with phosphorylated and non-phosphorylated forms of v-H-Ras and v-K-*ras* P21's and reacts with the p21 transitional products of the H-K-, and N-*ras* human genes.<sup>1,2</sup> It does not cross-react with Rap. Anti-v-H-Ras detects an epitope corresponding to amino acids 62-76 (EEYSAMRDQYM-RTGE) of v-H-Ras, and it neutralizes the activity of H-, K-, and N-Ras by binding to residues Glu-63, Ser-65, Ala-66, Met-67, Gln-70 and Arg-73.<sup>3</sup> Anti-v-H-Ras detects v-H-Ras by immunohistochemistry (frozen or paraffin sections), immunoprecipitation,<sup>2</sup> immunoblotting, and immunofluorescence in human, rat, and mouse.

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 signalling 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.<sup>4</sup> 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.<sup>4-6</sup> The third family member is designated c-N-*ras*.<sup>7,8</sup>

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.<sup>9</sup> Although the expression patterns of ras proto-oncogene proteins in normal human tissues are known,<sup>1</sup> similar information for activated ras oncogene encoded p21s and their relevance to human disease diagnosis and prognosis remains to be determined.<sup>10,11</sup>

### Reagents

Monoclonal Anti-v-H-Ras 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 occurs upon prolonged storage, clarify the solution by centrifugation before use.

### Product Profile

The recommended working concentration for immunoblotting is 1-5 µg/ml using SW 480 cell extract.

The recommended concentrations for immunohistochemistry (frozen or paraffin normal skin sections) and immunofluorescence are 5 µg/ml and 2.5 µg/ml, respectively. Paraffin sections will require treatment

with saponin (0.05% in water, 30 min.) or pepsin (0.1% in 0.1N HCl, 10-20 min.) at room temperature.

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

### References

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