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ProductInformation

Monoclonal Anti-Parkin, Clone PRK8
Purified Mouse Immunoglobulin

Product Code **P 6248**

Product Description

Monoclonal Anti- Parkin (mouse IgG2b isotype) is derived from the hybridoma PRK8 produced by the fusion of mouse myeloma cells (SP2 cells) and splenocytes from BALB/c mice immunized with recombinant human Parkin.[1] The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Parkin recognizes human, rat, mouse and hamster parkin (approx. 50 kDa). The antibody epitope resides within the Ring 2 domain of the parkin protein. The product is useful in ELISA, immunoblotting, immunoprecipitation and immunocytochemistry.[1]

Parkinson's disease is the second most common neurodegenerative disease after Alzheimer's disease. Parkinson's disease is characterized by movement disorders, namely a triad of rigidity, resting tremor and bradykinesia. It has been attributed to the loss of dopaminergic neurons in the substantia nigra that project to the basal ganglia. Recently, a new gene has been identified by positional cloning named parkin, which is responsible for a rare autosomal recessive form of Parkinsonism, AR-JP. The parkin gene encodes a protein of 465 amino acid residues with moderate similarity to ubiquitin at the amino-terminus and a ring-IBR-ring-finger motif at the carboxyl-terminus. The gene has 12 exons, five of which are deleted in AR-JP patients. Some other AR-JP patients have deletions affecting exon 4. Parkin is expressed in many tissues, including brain, heart, testis, and skeletal muscle. In the brain, parkin is expressed in various regions including the substantia nigra. Parkin is a ubiquitin-protein ligase whose physiological role is not known.[2-5]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: approx. 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 continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. 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

A working concentration of 0.25-0.5 µg/ml is determined by immunoblotting, using rat brain cytosolic S1 extract.

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

References

1. Pawlyk, A.C., et al., Novel monoclonal antibodies demonstrate biochemical variation of brain parkin with age., J. Biol. Chem., **278**, 48120-48128 (2003).
2. Kitada, T., et al., Mutations in the parkin gene cause autosomal recessive juvenile parkinsonism, Nature, **392**, 605-608 (1998).
3. Gu, W.J., et al., Cloning of rat parkin cDNA and distribution of parkin in rat brain, J. Neurochem., **74**, 1773-1776 (2000).
4. Takahashi, H., et al., Familial juvenile parkinsonism: clinical and pathologic study in a family, Neurology, **44**, 437-441(1994).

5. Mizuno, Y., et al., Parkin and Parkinson's disease, Curr. Opin. Neurol., **14**, 477-482 (2001).