PARKIN N-TERMINAL PEPTIDE

Product Information

Product Number **P 2615**
Storage Temperature –20 °C

Product Description

Parkin N-terminal peptide is a purified, lyophilized synthetic peptide corresponding to amino acid residues 83 to 97 of human Parkin[1,2] with the sequence: Thr-Gly-Gly-Asp-Asp-Pro-Arg-Asn-Ala-Ala-Gly-Gly-Cys-Glu-Arg. Purity, determined by ion spray mass spectrometry, is approximately 65%.

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, parkin, has been identified by positional cloning[1] that is responsible for a rare autosomal recessive form of Parkinsonism, AR-JP.[3] 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.[4]

Precautions and Disclaimer

Please consult the Material Safety Data Sheet for handling recommendations before working with this material.

Preparation Instructions

Reconstitute in sterile, deionized water (Sigma Product No. W4502). Gently mix at room temperature for 15 minutes.

Storage/Stability

After reconstitution, Parkin N-terminal peptide is stable for up to one month at 2–8 °C. For long term storage, freeze at –20 °C.

References

1. Kitada, T., et al., Mutations in the parkin gene cause autosomal recessive juvenile parkinsonism. Nature, **392**, 605-608 (1998).
2. Gu, W. J., et al., Cloning of rat parkin cDNA and distribution of parkin in rat brain, J. Neurochem., **74**, 1773-1776 (2000).
3. Takahashi, H. et al. Familial juvenile parkinsonism: clinical and pathologic study in a family. Neurology **44**, 437-441(1994).
4. Mizuno, Y., et al., Parkin and Parkinson's disease. Curr. Opin. Neurol., 14, 477-482 (2001).

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