Monoamine Oxidase B  
human, recombinant  
microsomes from baculovirus infected insect cells

Product Number M 7441  
Storage Temperature -70 °C

Synonym: MAO-B

Product Description
The microsomal product is prepared from insect cells (BTI-TN-5B1-4) infected with recombinant baculovirus containing cDNA inserts for human MAO-B. Monoamine Oxidase (MAO) is an integral flavoprotein of the outer mitochondrial membrane. MAOs are responsible for catalyzing the oxidative deamination of a wide variety of xenobiotic and endobiotic primary, secondary, and tertiary amines. The primary endogenous function of MAOs involves the inactivation of monoamine neurotransmitters, such as serotonin and dopamine. MAOs exist in two isoforms, MAO-A and MAO-B, which share approximately 70% sequence identity on the amino acid level. Both isoforms are nearly ubiquitous in mammals, but show particularly high enzymatic activity in the central nervous system and liver.

Monoamine Oxidase B is found in high levels in the liver, brain, and platelets, but is only weakly expressed in the placenta. Benzylamide and phenylethylamide are preferentially catalyzed by MAO-B, which shows a higher efficiency with tertiary amines than its closely related isoform, and shows preference for highly lipophilic substrates. MPTP is an important tertiary amine metabolized by MAO-B exclusively in neurons. The product of this metabolism, MPP⁺ is a known Parkinson inducing dopaminergic neurotoxin.

This product is supplied as a 0.5 ml solution of 100 mM potassium phosphate, pH 7.4, 0.25 M sucrose, 0.1 mM EDTA, and 5% glycerol. Protein concentration and content, and kynuramine deamination activity of the microsomes are reported on a lot-to-lot basis.

Precautions and Disclaimer
This product is for laboratory use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
It is recommended that the product be thawed rapidly in a 37 °C water bath and kept on ice until use.

Storage/Stability
The product ships on dry ice and it is recommended to store the product at -70 °C. Avoid repeated freeze-thaw cycles.

References

AC/MAM 2/03