



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Monoamine Oxidase Insect Cell Control Microsomes

Product Number **M 7566**
Storage Temperature -70 °C

Product Description

The Insect Cell Control Microsome preparation is intended to be used as a negative control for MAO-A and MAO-B microsomes (Product Codes M 7316 and M 7441, respectively). Insect cells (BTI-TN-5B1-4) infected with wild type baculovirus (*Autographa californica*) were used to prepare these microsomes.

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.¹ Both isoforms are nearly ubiquitous in mammals, but show particularly high enzymatic activity in the central nervous system and liver.

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 absence of 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

1. Toxicology, Oesch, F., and Arand, M., Academic Press (San Diego, CA: 1999), pg. 93.
2. Kalgutkar, A.S., et al., Interactions of nitrogen-containing xenobiotics with monoamine oxidase (MAO) isozymes A and B: SAR studies on MAO substrates and inhibitors. *Chemical Research in Toxicology*, **14**, 1139-1162, (2001).
3. Benedetti, M.S., Biotransformation of xenobiotics by amine oxidases. *Fundamentals of Clinical Pharmacology*, **15**, 75-84 (2001).
4. Youdim, M.B.H., and Finberg, J.P.M., New directions in monoamine oxidase A and B selective inhibitors and substrates. *Biochemical Pharmacology*, **41**, 155-162 (1991).

AC/MAM 2/03

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.