



Cell Technology, Inc

Fluoro: MAO™

Monoamine Oxidase A & B Detection Kit

Key Benefits

- Non Radioactive
- Can monitor multiple time points to follow kinetics.
- One-step, no wash assay.
- Adaptable for High Throughput format.
- Sensitive

Assay Principle

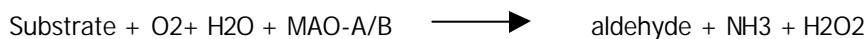
Monoamine oxidase (MAO) is a flavin-containing enzyme that catalyses the oxidation of a variety of amine-containing neurotransmitters such as serotonin, norepinephrine, epinephrine and dopamine to yield the corresponding aldehydes (1). MAO exists in two isoforms, namely MAO-A and MAO-B, which are the products of two distinct genes (2).

MAO-A and B exhibit different specificities to substrates and inhibitor selectivities. Extensive studies have been performed to characterize their properties (3-7). MAO-A acts preferentially on serotonin and norepinephrine, and is inhibited by clorgyline. MAO-B acts preferentially on 2-phenylethylamine and benzylamine and is inhibited by deprenyl and pargyline.

Localized in the outer mitochondrial membrane, these enzymes are found throughout the body. Often only one form of the enzyme is present in a specific organ and/or within a specific cell type (8-9). In addition to their role in regulating neurotransmitters, these enzymes are also involved in processing biogenic amines (10) including tyramine (11).

The Fluoro MAO-A/B detection kit utilizes a non- fluorescent detection reagent to measure H₂O₂ released from the conversion of a substrate to its aldehyde via MAO-A/B. Furthermore H₂O₂ oxidizes the detection reagent in a 1:1 stoichiometry to produce a fluorescent product resorufin. This oxidation is catalyzed by Peroxidase.

Reaction:



Excitation 530-570. Emission 590-600nm

The fluorescent monoamine oxidase detection kit can be used to monitor MAO activity and screen of MAO inhibitors.

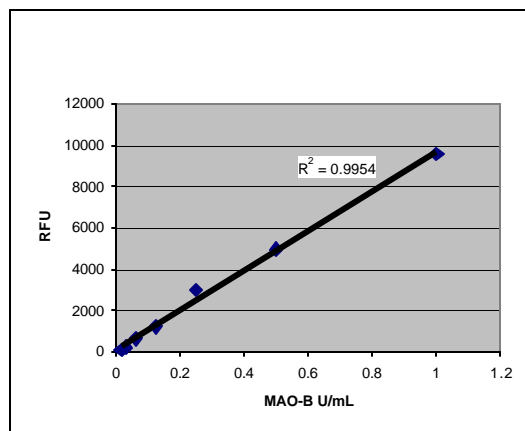


Figure 1. Recombinant MAO-B was serially diluted in 1X Reaction Buffer. 100 μ L of diluted MAO-B per well was mixed with 100 μ L of Reaction Cocktail. The reaction was incubated at Room Temperature in the dark for 1 hour. Fluorescence was measured with a microplate reader using excitation at 530nm and fluorescence emission at 590nm.

Ordering Information

Catalog #	Size	Price (US\$)
FLMAO 100-3	500	245

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