

TECHNICAL DATA SHEET

Catalog # MS141

Complex I Enzyme Activity Microplate Assay Kit

Rev.3

LOT #:

APPLICATIONS: Complex I activity

SPECIES CROSS-REACTIVITY: Human, rat, mouse, bovine

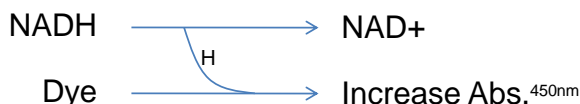
KIT COMPONENTS:	Item	MS141
	Buffer (20X)	25 mL
	Block (10X)	10 mL
	Detergent (10X)	1 mL
	NADH Reagent 1 (20X)	1 mL
	Reagent 2 (100X)	0.2 mL
	96-well microplate (12 strips)	1

STORAGE CONDITIONS: Store the Reagent 1 and 2 at -80°C. When planning multiple experiments, aliquot these reagents to prevent freeze-thaw cycles. Store all other components at 4°C.

COUNTRY OF ORIGIN: USA

BACKGROUND:

The Complex I Enzyme Activity Microplate Assay Kit (MS141) is used to determine the activity of mitochondrial OXPHOS Complex I (NADH dehydrogenase or NADH ubiquinone oxidoreductase). The enzyme is immunocaptured within the wells of the microplate and activity is determined by following the oxidation of NADH to NAD⁺ and the simultaneous reduction of a dye which leads to increased absorbance at 450 nm.



Complex I activity reaction scheme. The oxidation of NADH is linked to the reduction of a dye which has increased absorbance at 450 nm and so appears yellow in color.

Complex I activity is controlled by enzyme amount and by post-translational phosphorylation at key specific regulatory residues. Cellular metabolism governs these two factors. Ultimately the cell type and growth conditions will affect Complex I activity measurements.

Note: This activity assay measures the diaphorase-type activity of Complex I. This activity is not dependent on the presence of ubiquinone and therefore inhibitors, such as rotenone, which bind at or near the ubiquinone binding-site, do not inhibit this assay. However, the activity assay is affected by enzyme assembly deficiencies.

Note: This product is for research purposes only. It is not to be used in humans or for diagnostic purposes.

WARRANTY – MitoSciences Inc warranties that products will perform as indicated in the published Technical Data Sheet for 1 month from date of purchase when stored according to specifications and when used consistent with recommended protocols. If you experience results which materially differ from those described, send evidence of the non-performing product for replacement of the original product purchased or a credit toward any other of the company's products or services.