



Mitochondrial Antigen (DAG-T1243)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Purified from bovine heart muscle. After coating onto ELISA plates the product will bind autoantibodies to mitochondrial antigen.
Purity	The mitochondrial antigen (5 subunits: PDH E2 (74 kDa), PDH E3 (Protein X, 56 kDa), PDH E3 (lipoamide dehydrogenase, 55 kDa), PDH E1α (41 kDa) and PDH E1β (36 kDa)) is more than 90% pure, as assessed by SDS polyacrylamide gel electrophoresis.
Concentration	0.1-1.0 mg/ml
Size	0.20 mg
Preservative	None
Storage	The product is stabilised with 0.1% Micr-O-protect™ and 20% glycerol. Store at -20°C or below (long term) or at +4°C (short term). Avoid repeated freezing and thawing. Mix thoroughly before use.

BACKGROUND

Introduction	<p>The mitochondrion (plural mitochondria) is a membrane bound organelle found in most eukaryotic cells (the cells that make up plants, animals, fungi, and many other forms of life). The word mitochondrion comes from the Greek μῆτρος, mitos, i.e. "thread", and χονδρῶν, chondrion, i.e. "granule".</p> <p>Mitochondria range from 0.5 to 1.0 micrometer (μm) in diameter. These structures are sometimes described as "cellular power plants" because they generate most of the cell's supply of adenosine triphosphate (ATP), used as a source of chemical energy. In addition to supplying cellular energy, mitochondria are involved in other tasks such as signaling, cellular differentiation, cell death, as well as the control of the cell cycle and cell growth. Mitochondria have been implicated in several human diseases, including mitochondrial disorders and cardiac dysfunction, and may play a role in the aging process. More recent research indicates that autism, especially severe autism, is correlated with mitochondrial defects.</p>
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Several characteristics make mitochondria unique. The number of mitochondria in a cell can vary widely by organism, tissue, and cell type. For instance, red blood cells have no mitochondria, whereas liver cells can have more than 2000. The organelle is composed of compartments that carry out specialized functions. These compartments or regions include the outer membrane, the intermembrane space, the inner membrane, and the cristae and matrix. Mitochondrial proteins vary depending on the tissue and the species. In humans, 615 distinct types of proteins have been identified from cardiac mitochondria, whereas in rats, 940 proteins have been reported. The mitochondrial proteome is thought to be dynamically regulated. Although most of a cell's DNA is contained in the cell nucleus, the mitochondrion has its own independent genome. Further, its DNA shows substantial similarity to bacterial genomes.

Keywords	Mitochondrion;Mitochondrial Antigen;
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