Datasheet for ABIN1326866

Myoglobin ELISA Kit

2 Publications

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Overview

Quantity:	96 tests
Target:	Myoglobin (MB)
Reactivity:	Human
Method Type:	Sandwich ELISA
Application:	ELISA

Product Details

Purpose:	The Myoglobin Blood Test ELISA is based on the principle of a solid phase enzyme-linked immunosorbent assay. The myoglobin assay system utilizes a unique monoclonal antibody directed against a distinct antigenic determinant on the myoglobin molecule. Mouse monoclonal anti-myoglobin antibody is used for solid phase immobilization (on the microtiter wells). A goat anti-myoglobin antibody is in the antibody-enzyme (horseradish peroxidase) conjugate solution. The test sample is allowed to react simultaneously with the two antibodies, resulting in the myoglobin molecules being sandwiched between the solid phase and enzyme-linked antibodies. After a 45 minute incubation at room temperature, the wells are washed with water to remove unbound labeled antibodies. A TMB (Tetramethyl-benzidine) Reagent is added and incubated for 20 minutes, resulting in the development of a blue color. The color development is stopped with the addition of Stop Solution changing the color to yellow. The concentration of myoglobin is directly proportional to the color intensity of the myoglobin blood test sample. Absorbance is measured spectrophotometrically at 450 nm.
Sample Type:	Blood
Analytical Method:	Quantitative

Product Details

Detection Method:	Colorimetric

Target Details

Target:	Myoglobin (MB)
Alternative Name:	Myoglobin (MB Products)
Background:	Myoglobin, a heme protein with a molecular weight of approximately 17,500 Daltons is found in both cardiac and skeletal muscle. Damage to either type of muscle following conditions such as trauma, ischemia, and diseases that cause myopathy, is associated with the release of myoglobin into serum. Specifically, following cardiac necrosis associated with myocardial infarction (MI), myoglobin is one of the first markers to rise above normal levels. Myoglobin levels increase measurably above baseline within 2-4 hours post-infarct, peaking at 9-12 hours, and returning to baseline within 24-36 hours. In the absence of skeletal muscle trauma or other factors associated with a non-cardiac related increase in circulating myoglobin, its levels have been used as an early marker for myocardial infarct. A number of reports suggest using the measurement of myoglobin as a diagnostic aid in ruling out myocardial infarction with negative predictive values of up to 100% reported at certain time periods after the onset of symptoms.9-15 Unlike the other cardiac enzymes such as creeatine kinase and the MB isoform (i.e., CK and CKMB) which do not reach serum levels until several hours post-infarction (approx. 19 hours), myoglobin levels can be expected to peak within 6 to 9 hours. The Myoglobin Enzyme Immunoassay provides a rapid, sensitive, and reliable myoglobin assay for the quantitative measurement of myoglobin in serum. The antibodies developed for the test will determine a minimal concentration of 5.0 ngml, and there is no cross-reactivity with related cardiac or skeletal enzymes.
Pathways:	Brown Fat Cell Differentiation

Application Details

Plate:	Pre-coated
Restrictions:	For Research Use only

Handling

Storage:	4 °C

Publications

Product cited in:	Townsend, Hoffman, Fragala, Jajtner, Gonzalez, Wells, Mangine, Fukuda, Stout: "TNF-? and TNFR1 responses to recovery therapies following acute resistance exercise." in: **Frontiers in physiology**, Vol. 6, pp. 48, (2015) (PubMed). Kupchak, Kraemer, Hoffman, Phinney, Volek: "The impact of an ultramarathon on hormonal and biochemical parameters in men." in: **Wilderness & environmental medicine**, Vol. 25, Issue 3, pp. 278-88, (2014) (PubMed).