abcam

Product datasheet

Pyruvate dehydrogenase (PDH) Profiling ELISA Kit ab110174

2 References 2 Images

Overview

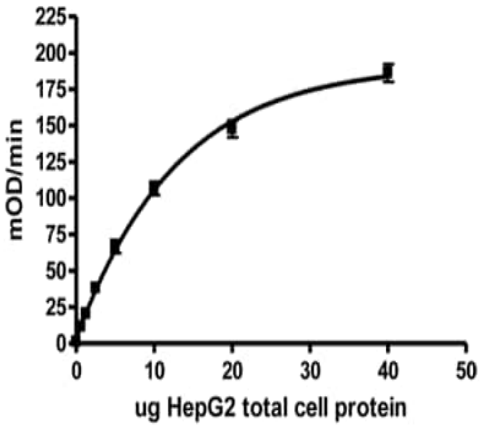
Product name	Pyruvate dehydrogenase (PDH) Profiling ELISA Kit
Detection method	Colorimetric
Sample type	Cell culture extracts, Tissue
Assay type	Sandwich (qualitative)
Assay duration	Multiple steps standard assay
Species reactivity	**Reacts with:** Mouse, Rat, Cow, Human
Product overview	Abcam's Pyruvate dehydrogenase (PDH) in vitro ProfilingELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the measurement of Pyruvate dehydrogenase (PDH) in Human, bovine, mouse, and rat whole tissue or cell lysate samples. Capture antibodies are pre-coated in the wells of modular microplates, which can be broken into 8-well strips. This assay is a "sandwich" ELISA, where the PDH enzyme is purified and immobilized by an anti-PDH capture antibody pre-coated in the microplate wells. The amount of captured PDH is determined by adding a second (detector) anti-PDH antibody which binds to the captured PDH hat a different epitope. This is followed by binding of an HRP conjugated goat anti-mouse antibody that binds the detector anti-PDH antibody. The detector-bound HRP then changes the colorless HRP development solution to blue and the color intensity (absorbance) is proportional to the amount of PDH captured. All of our microplate assays utilize our highly-validated immunocapture antibodies, which are able to capture large, multi-subunit enzyme complexes in their fully intact state.
Notes	5X Stabilizer should be stored at -20°C. Remainder of kit should be stored at 4°C. When stored as recommended the kit is stable for 6 months. PDH is the key regulatory enzyme of cellular metabolism because it links the TCA cycle and subsequent oxidative phosphorylation with glycolysis and gluconeogenesis as well as with both lipid and amino acid metabolism. PDH activity is regulated primarily by PDK-dependent phosphorylation and PDP-dependent dephosphorylation of PDH. Phosphorylation inactivates PDH whereas dephosphorylation activates PDH. Phosphorylation occurs at Serines 232, 293, and 300 of the human E1α subunits.
Platform	Microplate

Properties

Storage instructions Please refer to protocols.

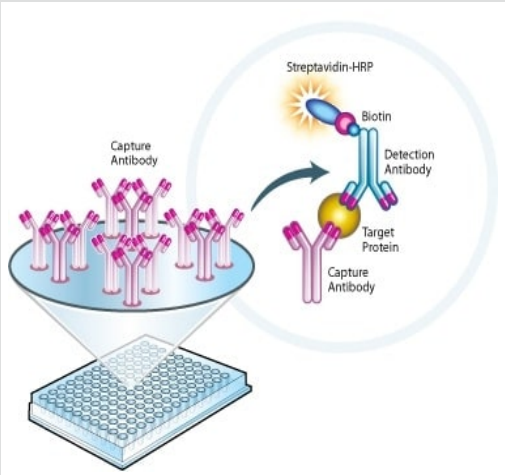
Components	96 tests
10X Blocking Solution	1 x 10ml
20X Buffer	1 x 20ml
20X Detector Antibody	1 x 1ml
20X HRP Label	1 x 1ml
5X Stabilizer	1 x 13ml
96-well Microplate (12 strips)	1 unit
Detergent	1 x 1ml
HRP/TMB Development Solution	1 x 20ml

Images



ELISA - Pyruvate dehydrogenase (PDH) Protein Quantity Microplate Assay Kit (ab110174)

An example of the quantity of PDH capture from a HepG2 cultured cell lysate. The sample was diluted to show that over this range of concentrations that can be used. Each sample was measured in 6 replicates. Bars show standard deviations.



Sandwich ELISA - Pyruvate dehydrogenase (PDH) Protein Quantity Microplate Assay Kit (ab110174)

Abcams' protein quantity microplate assays use the well-established sandwich ELISA format, whereby capture and detector antibodies are used to immobilize and then quantify a target protein or enzyme. All of our microplate assays utilize our highly-validated immunocapture antibodies, which are able to capture large, multi-subunit enzyme complexes in their fully intact state. Capture antibodies are pre-coated in the wells of premium Nunc MaxiSorp™ modular microplates, which can be broken into 8-well strips. After the target has been immobilized in the well, a second monoclonal antibody, against a different epitope on the target, is added to the well. This detector antibody is either directly labeled with biotin, or a biotin-labeled goat anti-mouse secondary is added. Substrate plus HRP or AP conjugated to streptavidin provide a colorimetric signal that is readable by any plate readers capable of standard ELISA absorbance measurements.

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