abcam

Product datasheet

Complex I Rodent Protein Quantity Dipstick Assay Kit ab109875

3 Images

Overview

Product name	Complex I Rodent Protein Quantity Dipstick Assay Kit
Sample type	Cell culture extracts, Tissue
Assay type	Sandwich (quantitative)
Species reactivity	**Reacts with:** Mouse, Rat
Product overview	Contains 30 or 90 dipsticks and necessary components to quantify the levels of the fully assembled Complex I enzyme complex from mouse and rat samples. The kit includes sufficient materials to generate a standard curve and evaluate several unknown samples. Based on the immunologic sandwich assay, the kit utilizes two monoclonal antibodies (mAbs) specific to different antigens present on the Complex I enzyme complex. One antibody is immobilized on the nitrocellulose membrane in a thin line perpendicular to the length of the dipstick, while the other is gold-conjugated and combined with the sample mix. The sample contents containing the gold-conjugated mAb wick past the mAb immobilized on the dipstick. When assembled Complex I is present in the sample, a red line appears at the site of the anti-Complex I antibody line. The signal intensity is directly related to the amount of Complex I in the sample. The signal intensity is best measured by a dipstick reader or may be analyzed by another imaging system. To identify defects in Complex I that do not affect enzyme assembly combine this assay with our Complex I Enzyme Activity Dipstick Assay Kit (ab109720) to determine the relative specific activity of Complex I.
Notes	All components are stable in their provided containers at room temperature out of direct sunlight. After diluting the 10X Blocking Buffer to 2X, store at 4°C. For long-term storage, all buffers can be stored at 4°C.
Tested applications	**Suitable for:** Sandwich ELISA
Platform	Reagents

Properties

Storage instructions	Store at +4°C. Please refer to protocols.

Components	90 tests	30 tests
Buffer B (10X Blocking solution)	3 x 0.4ml	1 x 0.4ml
Dipsticks	1 x 90 units	1 x 30 units
Extraction Buffer	3 x 15ml	1 x 15ml
Gold-conjugated antibody (dried in microplate wells)	1 x 90 tests	1 x 30 tests
Wash buffer	3 x 1ml	1 x 1ml

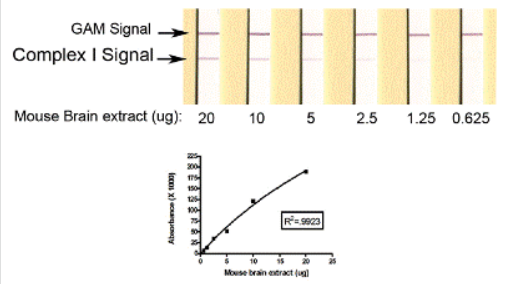
Applications

Our Abpromise guarantee covers the use of **ab109875** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

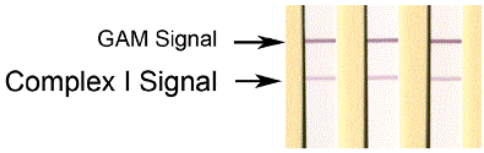
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent dilution.

Images



Sandwich ELISA - Complex I Rodent Protein Quantity Dipstick Assay Kit (ab109875)

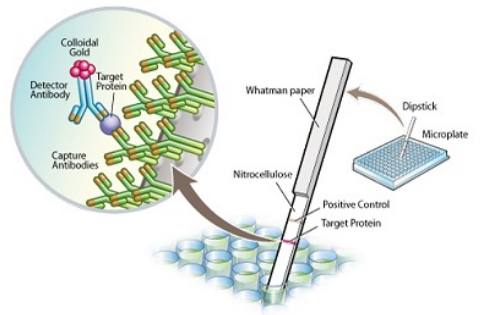
An example using MS133 to quantify Complex I levels using various concentration of mouse brain tissue. Shown is a 1:2 dilution series using a positive control sample. Approximately 6 to 8 dipsticks are suitable for covering the entire working range and the blank for background levels. In this example the dilution series starts with 20 µg of mouse brain tissue extract. A one-site hyperbola line was generated for best-fit analysis using GraphPad.



interpolated values (ug)	average (ug)	st dev.	% error
12.7	13.5	0.6658	4.94%
13.8			
13.9			

Sandwich ELISA - Complex I Rodent Protein Quantity Dipstick Assay Kit (ab109875)

An example using MS133 to quantify Complex I levels using various concentration of mouse brain tissue. Based on the above results, 13 µg of tissue extract was loaded to determine intra-assay reproducibility. (Note: for a statistical analysis it is preferred to use two dipsticks for each sample; intra-assay CV's are typically <=10%). The average of the signal intensities was determined, and then the amount (µg) of Complex I was interpolated off of the standard curve.



Sandwich ELISA - Complex I Rodent Protein Quantity Dipstick Assay Kit (ab109875)

Dipstick assays use the well-established lateral flow concept, whereby capture antibodies are striped onto nitrocellulose membrane and a Whatman paper wicking pad draws the sample through the antibody bands. Detector antibodies, conjugated to gold, are dried in the wells of a 96-well plate. Sample is added to the well, the dipstick inserted, and within minutes the line for each target is revealed as the protein-detector antibody-gold complex binds with the capture antibodies. Multiplexing dipstick assays have multiple target protein lines. A positive control goat anti-mouse antibody line is included on all assays to ensure that adequate wicking of the sample occurred.

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