

Product datasheet

Complex I Rodent Protein Quantity Dipstick Assay Kit  
ab109875

3 Images

Overview

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<b>Product name</b>	Complex I Rodent Protein Quantity Dipstick Assay Kit
<b>Sample type</b>	Cell culture extracts, Tissue
<b>Assay type</b>	Sandwich (quantitative)
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat
<b>Product overview</b>	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.

<b>Notes</b>	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.
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<b>Tested applications</b>	<b>Suitable for:</b> Sandwich ELISA
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<b>Platform</b>	Reagents
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Properties

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<b>Storage instructions</b>	Store at +4°C. Please refer to protocols.
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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

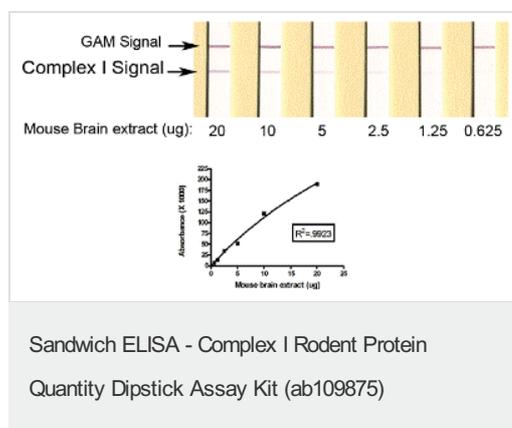
## Applications

Our [Abpromise guarantee](#) covers the use of **ab109875** in the following tested applications.

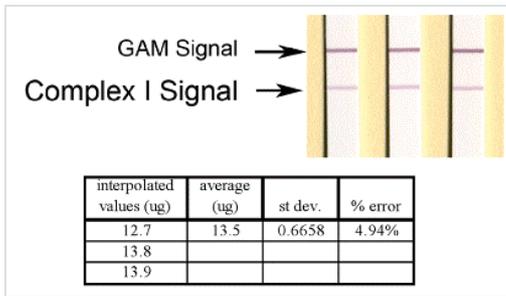
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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

## Images

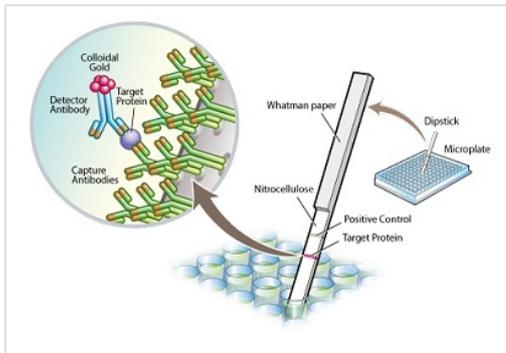


An example using MS133 to quantify Complex I levels using various concentration of mouse brain tissue. Shown is a 1:2 dilution series using a positive control sample. Approximately 6 to 8 dipsticks are suitable for covering the entire working range and the blank for background levels. In this example 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.



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.



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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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