abcam

Product datasheet

Frataxin Protein Quantity Dipstick Assay Kit ab109881

19 References 3 Images

Overview

Product name	Frataxin Protein Quantity Dipstick Assay Kit
Sample type	Whole Blood
Assay type	Sandwich (quantitative)
Species reactivity	**Reacts with:** Human
Product overview	ab109881 is used to rapidly quantify frataxin protein levels from human sample materials. Purification of mitochondria is not necessary for the performance of this assay. Based on the immunologic sandwich assay, the kit utilizes two monoclonal antibodies (mAbs) specific to different antigens present on the mature form of frataxin. One antibody is immobilized on the nitrocellulose membrane of the dipstick in a thin line perpendicular to the length of the dipstick while the other is gold-conjugated which gives a visual signal. When frataxin is present in the sample, a red-colored line appears on the dipstick at the site of the anti-frataxin mAb immobilized on the membrane. The signal intensity is directly related to the level of frataxin in the sample. The signal intensity is best measured by a dipstick reader or may be analyzed by another imaging system.
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	30 tests
Buffer B (10X Blocking solution)	1 x 0.4ml
Dipsticks	1 x 30 units
Extraction Buffer (ab260490)	1 x 15ml

Components	30 tests
Gold-conjugated antibody (dried in microplate wells)	1 x 30 tests
Wash buffer	1 x 2ml

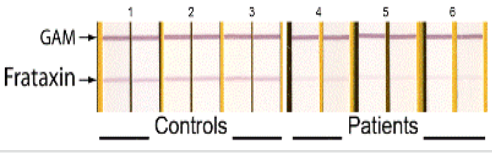
Applications

The Abpromise guarantee Our Abpromise guarantee covers the use of ab109881 in the following tested applications.

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

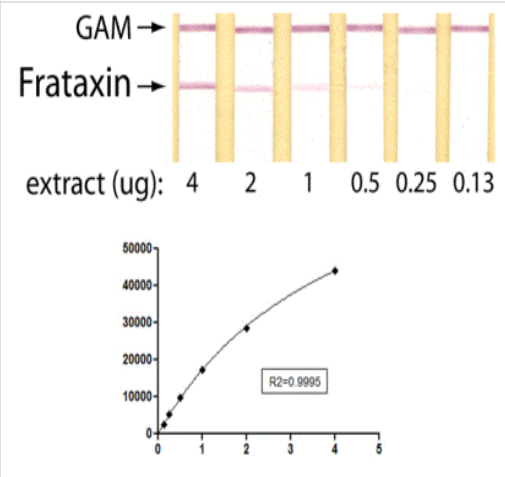
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent dilution.

Images



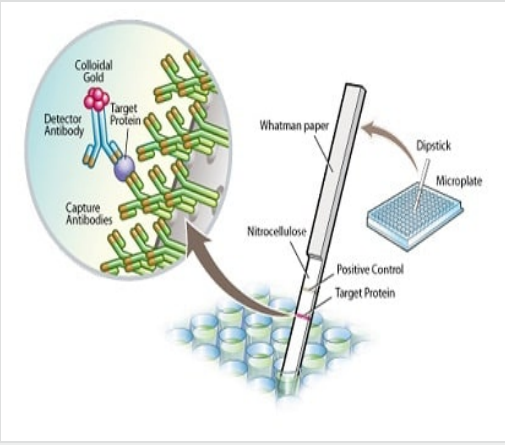
Sandwich ELISA - Frataxin Protein Quantity Dipstick Assay Kit (ab109881)

An example using ab109881 to quantify frataxin levels from ß - lymphocyte cell culture samples derived from control individuals and Friedreich's Ataxia (FA) patients. Based on the above standard curve values, of protein extract for the controls and FA patient samples. (Note: for a statistical analysis, it is preferred to use two dipsticks for each sample; intra-assay CV's are typically <=10%.) For this analysis, the FA patients had between 550 - 925 GAA repeats on the smaller allele. Using GraphPad software, the signal intensity from the standard curve was interpolated and the relative amount of frataxin in the patients, as compared to the controls, was determined. Based on the above analysis, the patient samples had between 13% and 20% of frataxin levels compared to the control.



Sandwich ELISA - Frataxin Protein Quantity Dipstick Assay Kit (ab109881)

An example using ab109881 to quantify frataxin levels from ß - lymphocyte cell culture samples derived from control individuals and Friedreich's Ataxia (FA) patients. 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 4 µg of control sample. A one-site hyperbola line was generated for best-fit analysis using GraphPad.



Sandwich ELISA - Frataxin Protein Quantity Dipstick Assay Kit (ab109881)

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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