abcam

Product datasheet

Human GFAP ELISA Kit ab223867

Recombinant SimpleStep ELISA

2 References 5 Images

Overview

Product name Human GFAP ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Brain	8			5.3%

Inter-assay

Sample	n	Mean	SD	CV%
Brain	3			11.8%

Sample type Tissue Extracts

Assay type Sandwich (quantitative)

Sensitivity 47 pg/ml

Range 0.781 ng/ml - 50 ng/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Tissue Extracts	117	116% - 119%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview Human GFAP ELISA Kit (ab223867) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of GFAP protein in tissue extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human GFAP with 47 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This

approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes

Glial fibrillary acidic protein (GFAP) is a class-III intermediate filament, cell-specific marker that during development of the central nervous system, distinguishes astrocytes from other glial cells. Protein expression is also found in numerous cell types including astrocytes, ependymal cells, osteocytes, keratinocytes and chondrocytes. GFAP has also been found to be expressed in rat glomeruli, peritubular fibroblasts, stellate cells of the pancreas and liver tissue as well as Leydig cells of the testis in both hamsters and humans.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions

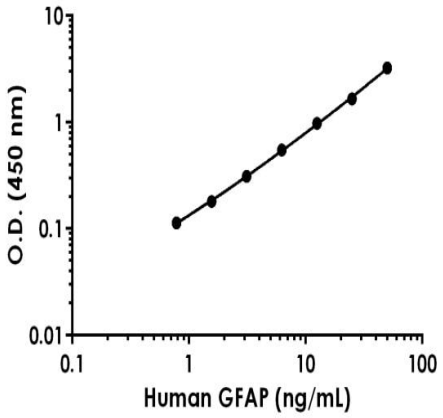
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests	1 x 96 tests
10X Human GFAP Capture Antibody	1 x 600µl	1 x 600µl
10X Human GFAP Detector Antibody	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml	1 x 10ml
Antibody Diluent CP2	1 x 6ml	1 x 6ml
Human GFAP Lyophilized Recombinant Protein	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent NS (ab193972)	1 x 12ml	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	1 unit

Components	1 x 96 tests	1 x 96 tests
Stop Solution	1 x 12ml	1 x 12ml
TMB Development Solution	1 x 12ml	1 x 12ml

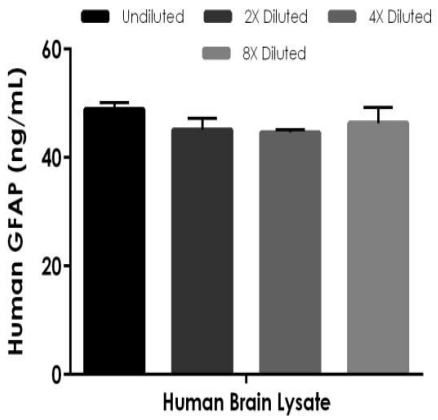
Function	GFAP, a class-III intermediate filament, is a cell-specific marker that, during the development of the central nervous system, distinguishes astrocytes from other glial cells.
Tissue specificity	Expressed in cells lacking fibronectin.
Involvement in disease	Defects in GFAP are a cause of Alexander disease (ALEXD) [MIM:203450]. Alexander disease is a rare disorder of the central nervous system. It is a progressive leukoencephalopathy whose hallmark is the widespread accumulation of Rosenthal fibers which are cytoplasmic inclusions in astrocytes. The most common form affects infants and young children, and is characterized by progressive failure of central myelination, usually leading to death usually within the first decade. Infants with Alexander disease develop a leukoencephalopathy with macrocephaly, seizures, and psychomotor retardation. Patients with juvenile or adult forms typically experience ataxia, bulbar signs and spasticity, and a more slowly progressive course.
Sequence similarities	Belongs to the intermediate filament family.
Post-translational modifications	Phosphorylated by PKN1.
Cellular localization	Cytoplasm. Associated with intermediate filaments.

Images



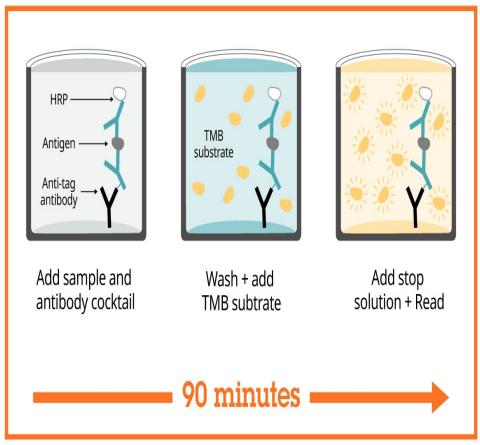
Example of human GFAP standard curve in 1X Cell Extraction Buffer PTR.

Background-subtracted data values (mean +/- SD) are graphed.



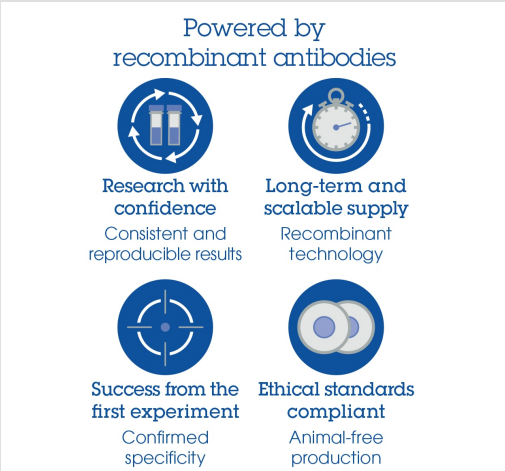
Interpolated concentrations of native GFAP in Human brain extract based on a 100 ng/mL extract load.

The concentrations of GFAP were measured in duplicate and interpolated from the GFAP standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean GFAP concentration was determined to be 46.27 ng/mL per 100 ng/ml extract load.



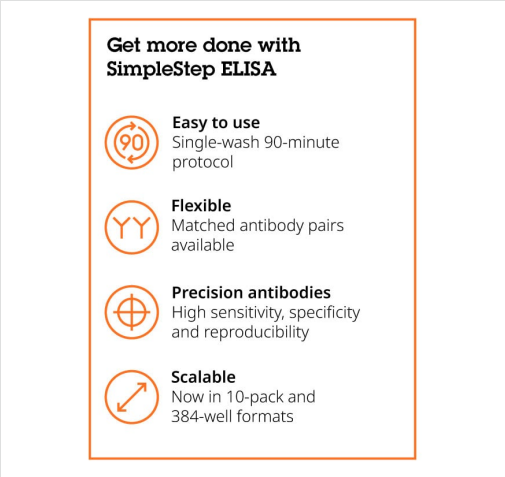
Sandwich ELISA - Human GFAP ELISA Kit (ab223867)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



Sandwich ELISA - Human GFAP ELISA Kit (ab223867)

To learn more about the advantages of recombinant antibodies see **here**.



Sandwich ELISA - Human GFAP ELISA Kit (ab223867)

To learn more about the advantages of SimpleStep ELISA® kits see **here**.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery

- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors