

Product datasheet

Mouse/Rat ACTH ELISA Kit (adrenocorticotrophic hormone) ab263880

Recombinant SimpleStep ELISA

[6 References](#) [6 Images](#)

Overview

Product name Mouse/Rat ACTH ELISA Kit (adrenocorticotrophic hormone)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Plasma	8			4.2%

Inter-assay

Sample	n	Mean	SD	CV%
Plasma	3			6.6%

Sample type Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 6 pg/ml

Range 7.81 pg/ml - 500 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	87	82% - 92%
Hep Plasma	116	113% - 120%
EDTA Plasma	105	100% - 110%
Cit plasma	101	89% - 107%

Assay time 1h 30m

Assay duration One step assay

Species reactivity

Reacts with: Mouse, Rat

Product overview

Mouse/Rat ACTH ELISA Kit (adrenocorticotrophic hormone) (ab263880) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of ACTH (adrenocorticotrophic hormone) protein in cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse/Rat ACTH (adrenocorticotrophic hormone) with 6 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

ACTH, adrenocorticotrophic hormone, is a peptide hormone cleavage product of the POMC protein produced by the pituitary gland. ACTH plays an important role in stress and circadian rhythm signaling. ACTH's primary action is on the adrenal cortex, where its binding induces the secretion of glucocorticoid steroid hormones. The peptide sequence for this hormone is highly evolutionarily conserved amongst mammals. Specifically, for mouse and rat, this sequence shares 100% identity.

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	10 x 96 tests
10X Mouse/Rat ACTH (adrenocorticotrophic hormone) Capture Antibody	1 x 600µl	10 x 600µl
10X Mouse/Rat ACTH (adrenocorticotrophic hormone) Detector Antibody	1 x 600µl	10 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 200ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml	2 x 50ml
Antibody Diluent 4BI	1 x 6ml	10 x 6ml

Components	1 x 96 tests	10 x 96 tests
Mouse/Rat ACTH (adrenocorticotrophic hormone) Lyophilized Protein	2 vials	10 x 2 vials
Plate Seals	1 unit	10 units
Sample Diluent NS (ab193972)	1 x 12ml	0 x 0ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	10 units
Stop Solution	1 x 12ml	1 x 120ml
TMB Development Solution	1 x 12ml	1 x 120ml

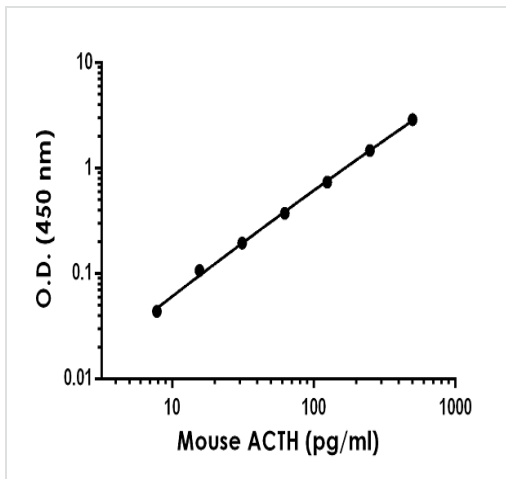
Relevance

ACTH occurs in cells of the anterior pituitary and in neurons in brain. It regulates the corticosteroid production in the adrenal cortex. Beta endorphin and Met enkephalin are endogenous opiates. MSH (melanocyte stimulating hormone) increases the pigmentation of skin by increasing melanin production in melanocytes.

Cellular localization

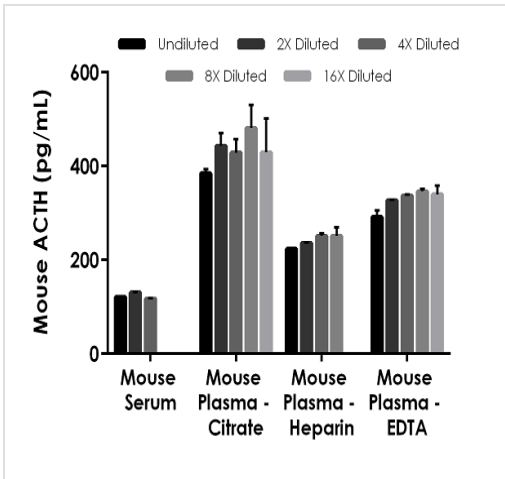
Secreted

Images



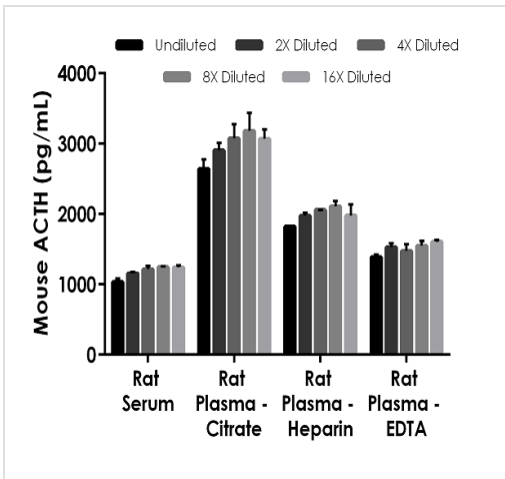
The ACTH standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse and rat ACTH standard curve in 1X Cell Extraction Buffer PTR.



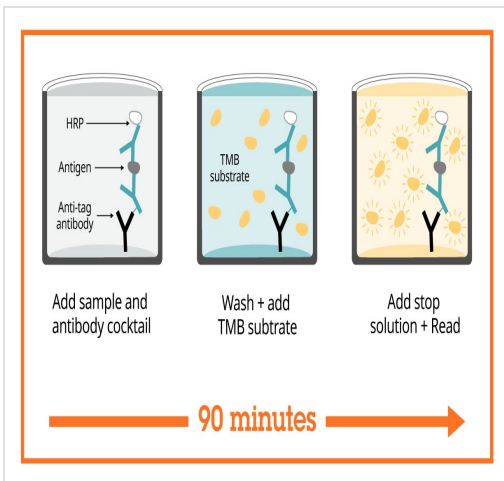
Interpolated concentrations of native ACTH in mouse and rat serum and plasma samples.

The concentrations of ACTH were measured in duplicates, interpolated from the ACTH standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (citrate) 50%, plasma (heparin) 50% and plasma (edta) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean ACTH concentration was determined to be 123.02 pg/mL in serum, 433.40 pg/mL in plasma (citrate), 240.48 pg/mL in plasma (heparin) and 328.43 pg/mL in plasma (edta).



Interpolated concentrations of native ACTH in rat serum and plasma samples.





The concentrations of ACTH were measured in duplicates, interpolated from the ACTH standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 25%, plasma (citrate) 15%, plasma (heparin) 15% and plasma (edta) 15%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean ACTH concentration was determined to be 1178.40 pg/mL in serum, 2974.54 pg/mL in plasma (citrate), 1988.24 pg/mL in plasma (heparin) and 1508.42 pg/mL in plasma (edta).



Sandwich ELISA - Mouse/Rat ACTH ELISA Kit
(adrenocorticotrophic hormone) (ab263880)

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.

Powered by recombinant antibodies

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

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To learn more about the advantages of recombinant antibodies see [here](#).

Get more done with SimpleStep ELISA



Easy to use
Single-wash 90-minute protocol



Flexible
Matched antibody pairs available



Precision antibodies
High sensitivity, specificity and reproducibility



Scalable
Now in 10-pack and 384-well formats

To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

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