

Product datasheet

Human Cytokeratin 14 ELISA Kit ab226895

Recombinant SimpleStep ELISA[®]

[6 Images](#)

Overview

Product name Human Cytokeratin 14 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Urine	5			4.1%

Inter-assay

Sample	n	Mean	SD	CV%
Urine	3			11.1%

Sample type Saliva, Urine, Cell culture extracts, Tissue Extracts

Assay type Sandwich (quantitative)

Sensitivity 4.9 pg/ml

Range 31.3 pg/ml - 2000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Saliva	102	99% - 106%
Urine	110	108% - 114%
Cell culture extracts	99	93% - 106%
Tissue Extracts	91	88% - 94%

Assay time 1h 30m

Assay duration One step assay

Species reactivity**Reacts with:** Human**Product overview**

Human Cytokeratin 14 ELISA Kit (ab226895) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Cytokeratin 14 protein in saliva, tissue extracts, urine, and cell culture extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Cytokeratin 14 with 4.9 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

Cytokeratin 14 is an intermediate filament protein in the keratin family and is a component of the cytoskeletal scaffold in epithelial cells. Cytokeratin 14 is mutated in epidermolysis bullosa simplex, Naegeli-Franceschetti-Jadassohn syndrome and Dermatopathia pigmentosa reticularis. Cytokeratin 14 is a 472-residue protein and the antibodies in this kit were raised to the C-terminal 357 residues.

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)

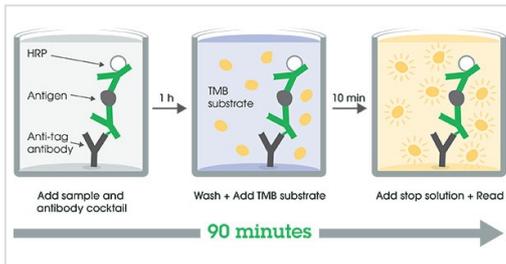
Properties**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BR	1 x 6ml
10X Human Cytokeratin 14 Capture Antibody	1 x 600µl

Components	1 x 96 tests
10X Human Cytokeratin 14 Detector Antibody	1 x 600µl
Human Cytokeratin 14 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 12ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

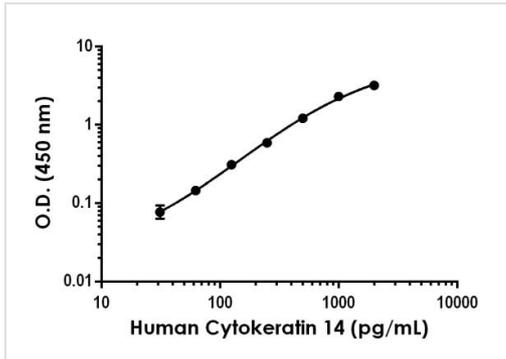
Function	The nonhelical tail domain is involved in promoting KRT5-KRT14 filaments to self-organize into large bundles and enhances the mechanical properties involved in resilience of keratin intermediate filaments in vitro.
Tissue specificity	Detected in the basal layer, lowered within the more apically located layers specifically in the stratum spinosum, stratum granulosum but is not detected in stratum corneum. Strongly expressed in the outer root sheath of anagen follicles but not in the germinative matrix, inner root sheath or hair. Found in keratinocytes surrounding the club hair during telogen.
Involvement in disease	<p>Defects in KRT14 are a cause of epidermolysis bullosa simplex Dowling-Meara type (DM-EBS) [MIM:131760]. DM-EBS is a severe form of intraepidermal epidermolysis bullosa characterized by generalized herpetiform blistering, milia formation, dystrophic nails, and mucous membrane involvement.</p> <p>Defects in KRT14 are a cause of epidermolysis bullosa simplex Weber-Cockayne type (WC-EBS) [MIM:131800]. WC-EBS is a form of intraepidermal epidermolysis bullosa characterized by blistering limited to palmar and plantar areas of the skin.</p> <p>Defects in KRT14 are a cause of epidermolysis bullosa simplex Koebner type (K-EBS) [MIM:131900]. K-EBS is a form of intraepidermal epidermolysis bullosa characterized by generalized skin blistering. The phenotype is not fundamentally distinct from the Dowling-Meara type, although it is less severe.</p> <p>Defects in KRT14 are the cause of epidermolysis bullosa simplex autosomal recessive (AREBS) [MIM:601001]. AREBS is an intraepidermal epidermolysis bullosa characterized by localized blistering on the dorsal, lateral and plantar surfaces of the feet.</p> <p>Defects in KRT14 are the cause of Naegeli-Franceschetti-Jadassohn syndrome (NFJS) [MIM:161000]; also known as Naegeli syndrome. NFJS is a rare autosomal dominant form of ectodermal dysplasia. The cardinal features are absence of dermatoglyphics (fingerprints), reticular cutaneous hyperpigmentation (starting at about the age of 2 years without a preceding inflammatory stage), palmoplantar keratoderma, hypohidrosis with diminished sweat gland function and discomfort provoked by heat, nail dystrophy, and tooth enamel defects.</p> <p>Defects in KRT14 are the cause of dermatopathia pigmentosa reticularis (DPR) [MIM:125595]. DPR is a rare ectodermal dysplasia characterized by lifelong persistent reticulate hyperpigmentation, noncicatricial alopecia, and nail dystrophy.</p>
Sequence similarities	Belongs to the intermediate filament family.
Cellular localization	Cytoplasm. Nucleus. Expressed in both as a filamentous pattern.

Images



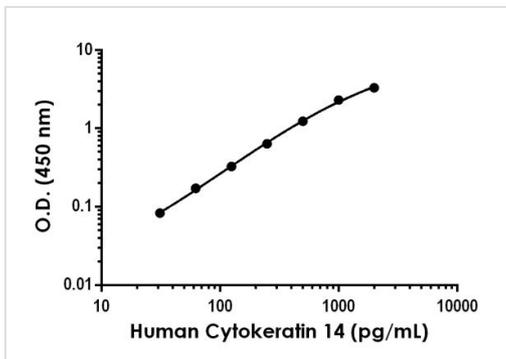
Other - Human Cytokeratin 14 ELISA Kit (ab226895)

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.



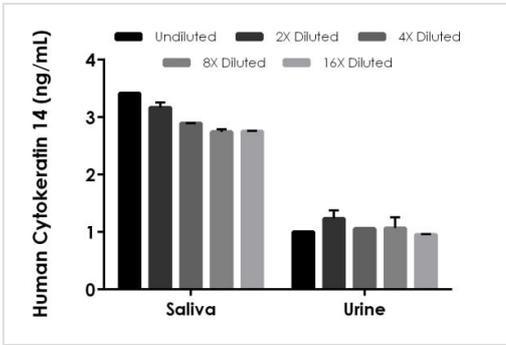
Example of Human Cytokeratin 14 standard curve in Sample Diluent NS

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



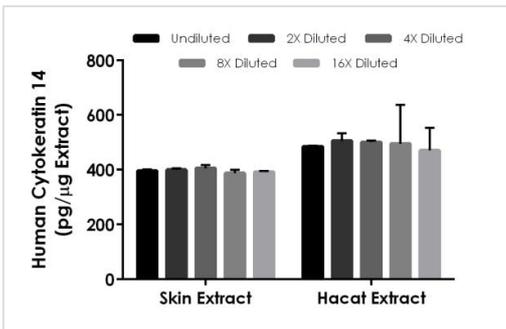
Example of Human Cytokeratin 14 standard curve in 1X Cell Extraction Buffer PTR

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



Interpolated concentrations of native Cytokeratin 14 in Human saliva and urine samples

The concentrations of Cytokeratin 14 were measured in duplicates, interpolated from the Cytokeratin 14 standard curves and corrected for sample dilution. Undiluted samples are as follows: saliva 50% and urine 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Cytokeratin 14 concentration was determined to be 3.0 ng/mL in saliva and 1.06 ng/mL in urine.



Interpolated concentrations of native Cytokeratin 14 in Human skin extract and HACAT cell extract

The concentrations of Cytokeratin 14 were measured in duplicate and interpolated from the Cytokeratin 14 standard curve and corrected for sample dilution and extract load. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Cytokeratin 14 concentration was determined to be 396 pg/µg skin extract and 491 pg/µg in HACAT cell extract.

Powered by recombinant antibodies

Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Sandwich ELISA - Human Cytokeratin 14 ELISA Kit
(ab226895)

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

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