abcam

Product datasheet

Human Cytokeratin 5 ELISA Kit ab226896

Recombinant SimpleStep ELISA

6 Images

Overview

Product name Human Cytokeratin 5 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	5			2.5%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			2.7%

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

Assay type Sandwich (quantitative)

Sensitivity 129 pg/ml

Range 312.5 pg/ml - 20000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	115	110% - 124%
Hep Plasma	125	112% - 141%
EDTA Plasma	112	106% - 116%
Cit plasma	114	108% - 120%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview

Human Cytokeratin 5 ELISA Kit (ab226896) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Cytokeratin 5 protein in cit plasma, edta plasma, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human Cytokeratin 5 with 129 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 5 is an intermediate filament protein in the keratin family and is a component of the cytoskeletal scaffold in epithelial cells. Cytokeratin 5 is mutated in epidermolysis bullosa simplex. Cytokeratin 5 is also a candidate biomarker for lung and breast cancers. Cytokeratin 5 is a 590 residue protein and the antibodies in this kit were raised to the C-terminal 250 residues.

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
Antibody Diluent 5BR	1 x 6ml
10X Human Cytokeratin 5 Capture Antibody	1 x 600µl
10X Human Cytokeratin 5 Detector Antibody	1 x 600µl
Human Cytokeratin 5 Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml

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

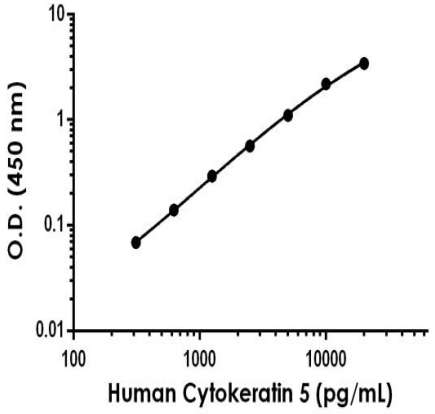
Involvement in disease

Defects in KRT5 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.
Defects in KRT5 are the cause of epidermolysis bullosa simplex with migratory circinate erythema (EBSMCE) [MIM:609352]. EBSMCE is a form of intraepidermal epidermolysis bullosa characterized by unusual migratory circinate erythema. Skin lesions appear from birth primarily on the hands, feet, and legs but spare nails, ocular epithelia and mucosae. Lesions heal with brown pigmentation but no scarring. Electron microscopy findings are distinct from those seen in the DM-EBS, with no evidence of tonofilament clumping.
Defects in KRT5 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.
Defects in KRT5 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, althought it is less severe.
Defects in KRT5 are the cause of epidermolysis bullosa simplex with mottled pigmentation (MP-EBS) [MIM:131960]. MP-EBS is a form of intraepidermal epidermolysis bullosa characterized by blistering at acral sites and 'mottled' pigmentation of the trunk and proximal extremities with hyper- and hypopigmentation macules.
Defects in KRT5 are the cause of Dowling-Degos disease (DDD) [MIM:179850]; also known as Dowling-Degos-Kitamura disease or reticulate acropigmentation of Kitamura. DDD is an autosomal dominant genodermatosis. Affected individuals develop a postpubertal reticulate hyperpigmentation that is progressive and disfiguring, and small hyperkeratotic dark brown papules that affect mainly the flexures and great skin folds. Patients usually show no abnormalities of the hair or nails.

Sequence similarities

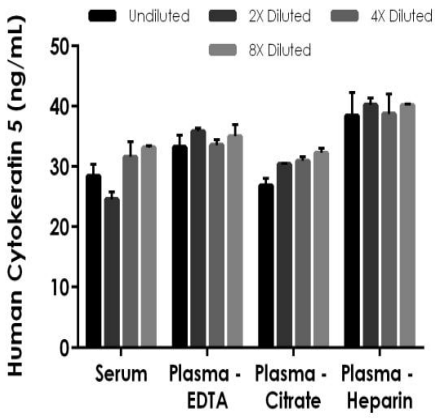
Belongs to the intermediate filament family.

Images



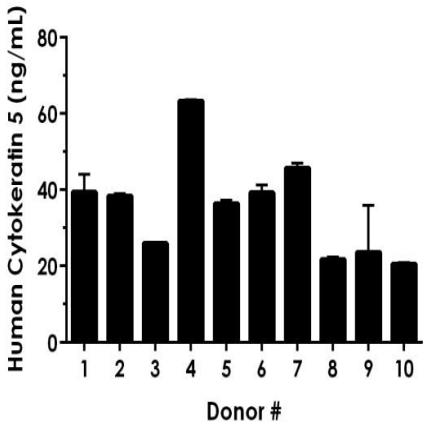
Example of Human Cytokeratin 5 standard curve in Sample Diluent NS

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



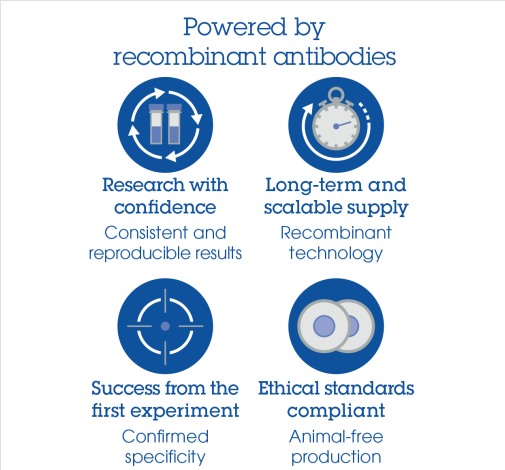
Interpolated concentrations of native Cytokeratin 5 in Human serum, plasma and cell culture supernatant samples

The concentrations of Cytokeratin 5 were measured in duplicates, interpolated from the Cytokeratin 5 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 50%, plasma (EDTA) 50%, plasma (citrate) 12.5%, and plasma (heparin) 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Cytokeratin 5 concentration was determined to be 29 ng/mL in serum, 35.1 ng/mL in plasma (EDTA), 30.1 ng/mL in plasma (citrate) and 39.6 ng/mL in plasma (heparin).



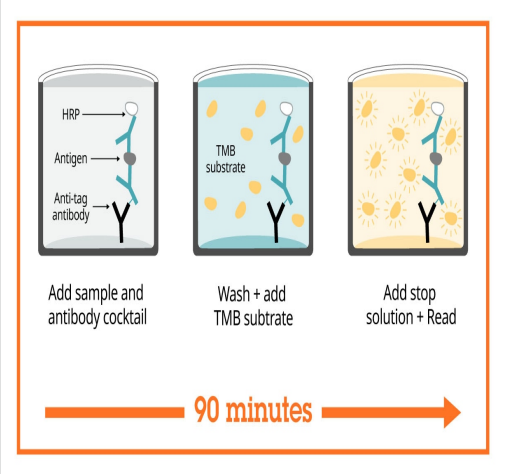
Serum from ten individual healthy Human female donors was measured in duplicate

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Cytokeratin 5 concentration was determined to be 35.5 ng/mL with a range of 20.6 – 63.4 ng/mL.



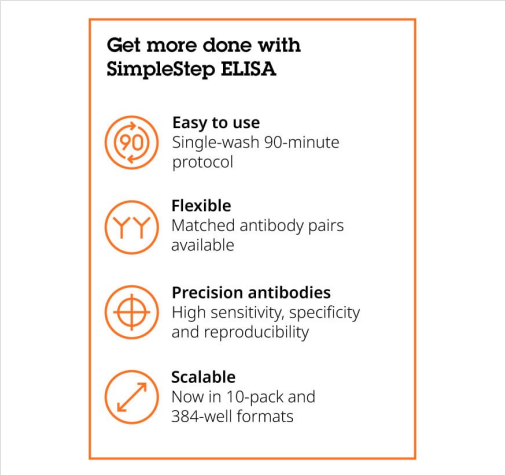
Sandwich ELISA - Human Cytokeratin 5 ELISA Kit (ab226896)

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



Sandwich ELISA - Human Cytokeratin 5 ELISA Kit (ab226896)

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 Cytokeratin 5 ELISA Kit (ab226896)

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

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