



Datasheet for ABIN625279

CEACAM1 ELISA Kit



[Go to Product page](#)

1 Image

Overview

Quantity:	96 tests
Target:	CEACAM1
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	20-15000 pg/mL
Minimum Detection Limit:	20 pg/mL
Application:	ELISA

Product Details

Purpose:	Human CEACAM-1 ELISA Kit for cell culture supernatants, plasma, and serum samples.
Sample Type:	Plasma, Cell Culture Supernatant, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Specificity:	This ELISA kit shows no cross-reactivity with the following cytokines tested: human Angiogenin, BDNF, BLC, ENA-78, FGF- 4, IL-1 alpha, IL-1 beta, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-11, IL-12 p70, IL-12 p40, IL-13, IL-15, I-309, IP-10, G-CSF, GM-CSF, IFN-gamma, Leptin (OB), MCP-1, MCP-2, MCP-3, MDC, MIP-1 alpha, MIP-1 beta, MIP-1 delta, PARC, PDGF, RANTES, SCF, TARC, TGF-beta, TIMP-1, TIMP-2, TNF-alpha, TNF-beta, TPO, VEGF.
Sensitivity:	< 20 pg/mL
Characteristics:	<ul style="list-style-type: none"> Strip plates and additional reagents allow for use in multiple experiments

Product Details

- Quantitative protein detection
- Establishes normal range
- The best products for confirmation of antibody array data

- Components:
- Pre-Coated 96-well Strip Microplate
 - Wash Buffer
 - Stop Solution
 - Assay Diluent(s)
 - Lyophilized Standard
 - Biotinylated Detection Antibody
 - Streptavidin-Conjugated HRP
 - TMB One-Step Substrate

- Material not included:
- Distilled or deionized water
 - Precision pipettes to deliver 2 μ L to 1 μ L volumes
 - Adjustable 1-25 μ L pipettes for reagent preparation
 - 100 μ L and 1 liter graduated cylinders
 - Tubes to prepare standard and sample dilutions
 - Absorbent paper
 - Microplate reader capable of measuring absorbance at 450nm
 - Log-log graph paper or computer and software for ELISA data analysis

Target Details

Target: CEACAM1

Alternative Name: CEACAM-1 ([CEACAM1 Products](#))

Background: The Human CEACAM-1 (Carcinoembryonic Antigen-related Cell Adhesion Molecule 1) ELISA (Enzyme-Linked Immunosorbent Assay) kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of human CEACAM-1 in serum, plasma, cell culture supernatants and urine. This assay employs an antibody specific for human CEACAM-1 coated on a 96-well plate. Standards and samples are pipetted into the wells and CEACAM-1 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-human CEACAM-1 antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of CEACAM-1 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm. Reproducibility: Intra-Assay: CV<10% Inter-Assay: CV<12%.

Gene ID: 634

and mix gently until dissolved. Dilute 20 ml of Wash Buffer Concentrate into deionized or distilled water to yield 400 ml of 1x Wash Buffer.

6. Briefly spin the Detection Antibody vial (Item F) before use. Add 100 μ L of 1x Assay Diluent B into the vial to prepare a detection antibody concentrate. Pipette up and down to mix gently (the concentrate can be stored at 4 °C for 5 days). The detection antibody concentrate should be diluted 80-fold with 1x Assay Diluent B and used in step 4 of Part VI Assay Procedure.

7. Briefly spin the HRP-Streptavidin concentrate vial (Item G) and pipette up and down to mix gently before use. HRP-Streptavidin concentrate should be diluted 400-fold with 1x Assay Diluent B. For example: Briefly spin the vial (Item G) and pipette up and down to mix gently . Add 25 μ L of HRP-Streptavidin concentrate into a tube with 10 ml 1x Assay Diluent B to prepare a final 400 fold diluted HRP- Streptavidin solution (don't store the diluted solution for next day use). Mix well.

Assay Procedure:

1. Bring all reagents and samples to room temperature (18 - 25 °C) before use. It is recommended that all standards and samples be run at least in duplicate.
2. Add 100 μ L of each standard (see Reagent Preparation step 2) and sample into appropriate wells. Cover well and incubate for 2.5 hours at room temperature or over night at 4 °C with gentle shaking.
3. Discard the solution and wash 4 times with 1x Wash Solution. Wash by filling each well with Wash Buffer (300 μ l) using a multi-channel Pipette or autowasher. Complete removal of liquid at each step is essential to good performance. After the last wash, remove any remaining Wash Buffer by aspirating or decanting. Invert the plate and blot it against clean paper towels.
4. Add 100 μ L of 1x prepared biotinylated antibody (Reagent Preparation step 6) to each well. Incubate for 1 hour at room temperature with gentle shaking.
5. Discard the solution. Repeat the wash as in step
6. Add 100 μ L of prepared Streptavidin solution (see Reagent Preparation step 7) to each well. Incubate for 45 minutes at room temperature with gentle shaking.
7. Discard the solution. Repeat the wash as in step
8. Add 100 μ L of TMB One-Step Substrate Reagent (Item H) to each well. Incubate for 30 minutes at room temperature in the dark with gentle shaking.
9. Add 50 μ L of Stop Solution (Item I) to each well. Read at 450 nm immediately.

Calculation of Results:

Calculate the mean absorbance for each set of duplicate standards, controls and samples, and subtract the average zero standard optical density. Plot the standard curve on log-log graph paper or using Sigma plot software, with standard concentration on the x-axis and absorbance on the y-axis. Draw the best-fit straight line through the standard points.

Typical Data: These standard curves are for demonstration only. A standard curve must be run

Application Details

with each assay. Assay Diluent A Human CEACAM-1 concentration (pg/mL) O D =4 50 n m 0.01 0.1 1 10 10 100 1,000 10,000 100,000 Assay Diluent B Human CEACAM-1 concentration (pg/mL) O D =4 50 n m 0.01 0.1 1 10 10 100 1,000 10,000 100,000

Sensitivity: The minimum detectable dose of CEACAM-1 is typically less than 20 pg/mL.

Recovery: Recovery was determined by spiking various levels human CEACAM-1 into human serum, plasma and cell culture media. Mean recoveries are as follows: Sample Type Average % Recovery Range (%) Serum 96.92 82-112 Plasma 86.50 70-105 Cell culture media 83.49 75-90

Linearity: Sample Type Serum Plasma Cell Culture Media 1:2 Average % of Expected 101.3 108.8 124.5 Range (%) 90-118 93-119 117-129 1:4 Average % of Expected 119.3 85.14 134.3 Range (%) 108-128 78-91 127-141

Reproducibility: Intra-Assay: CV<10 % Inter-Assay: CV<12 %

Assay Precision: Intra-Assay: CV< 10 % Inter-Assay: CV< 12 %

Restrictions: For Research Use only

Handling

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -20 °C

Storage Comment: The entire kit may be stored at -20°C for up to 1 year from the date of shipment. Avoid repeated freeze-thaw cycles. The kit may be stored at 4°C for up to 6 months. For extended storage, it is recommended to store at -80°C.

Expiry Date: 6 months

Images

ELISA

Image 1.

