

## Datasheet for ABIN411392

**CST3 ELISA Kit**[Go to Product page](#)**1** Image**1** Publication

## Overview

Quantity:	96 tests
Target:	CST3
Binding Specificity:	AA 1-146
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	312-20000 pg/mL
Minimum Detection Limit:	312 pg/mL
Application:	ELISA

## Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Cystatin C
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Saliva, Urine, Milk
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: M1-A146
Specificity:	Expression system for standard: NSO Immunogen sequence: M1-A146
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

## Target Details

Target:	CST3
Alternative Name:	CST3 ( <a href="#">CST3 Products</a> )
Background:	<p>Protein Function: As an inhibitor of cysteine proteinases, this protein is thought to serve an important physiological role as a local regulator of this enzyme activity.</p> <p>Background: Cystatin C or cystatin 3(formerly gamma trace, post-gamma-globulin or neuroendocrine basic polypeptide), a protein encoded by the CST3 gene, was originally described as a constituent of normal cerebrospinal fluid(CSF) and of urine from patients with renal failure.<sup>1</sup> Cystatin 3 has a low molecular weight(approximately 13.3 kilodaltons), and it is removed from the bloodstream by glomerular filtration in the kidneys. In humans, all cells with a nucleus(cell core containing the DNA) produce cystatin C as a chain of 120 amino acids. It is found in virtually all tissues and bodily fluids. Cystatin C, which belongs to the type II cystatin gene family, is a potent inhibitor of lysosomal proteinases<sup>2</sup>(enzymes from a special subunit of the cell that break down proteins) and probably one of the most important extracellular inhibitors of cysteine proteases<sup>3</sup>(it prevents the breakdown of proteins outside the cell by a specific type of protein degrading enzymes). Moreover, cystatin C is involved in network reorganization in the epileptic dentate gyrus.<sup>4</sup></p> <p>Synonyms: Cystatin-C,Cystatin-3,Gamma-trace,Neuroendocrine basic polypeptide,Post-gamma-globulin,CST3,</p> <p>Full Gene Name: Cystatin-C</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	1471
UniProt:	<a href="#">P01034</a>

## Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
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## Application Details

Comment:	Tissue Specificity: Expressed in submandibular and sublingual saliva but not in parotid saliva (at protein level). Expressed in various body fluids, such as the cerebrospinal fluid and plasma. Expressed in highest levels in the epididymis, vas deferens, brain, thymus, and ovary and the lowest in the submandibular gland. .
Plate:	Pre-coated
Protocol:	human Cystatin C ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Cystatin C has been precoated onto 96-well plates. Standards(NSO, M1-A146) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Cystatin C is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Cystatin C amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 20000pg/mL, 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL human Cystatin C standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum, plasma( heparin, EDTA), saliva, urine or human milk to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human Cystatin C standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(ng/ml): 2.68, Standard deviation: 0.115, CV(%): 4.3</li><li>• Sample 2: n=16, Mean(ng/ml): 6.13, Standard deviation: 0.288, CV(%): 4.7</li><li>• Sample 3: n=16, Mean(ng/ml): 12.83, Standard deviation: 0.744, CV(%): 5.8,</li><li>• Sample 1: n=24, Mean(ng/ml): 2.87, Standard deviation: 0.152, CV(%): 5.3</li><li>• Sample 2: n=24, Mean(ng/ml): 6.24, Standard deviation: 0.356, CV(%): 5.7</li><li>• Sample 3: n=24, Mean(ng/ml): 13.21, Standard deviation: 0.845, CV(%): 6.4</li></ul>
Restrictions:	For Research Use only

## Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C, 4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

## Handling

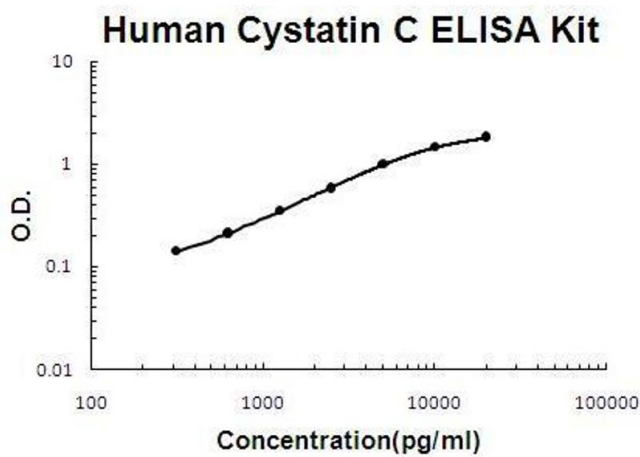
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Expiry Date: 12 months

## Publications

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- Product cited in:
- Leira, Ameijera, Domínguez, López-Arias, Ávila-Gómez, Pérez-Mato, Sobrino, Campos, DAiuto, Leira, Blanco: "Periodontal inflammation is related to increased serum calcitonin gene-related peptide levels in patients with chronic migraine." in: **Journal of periodontology**, Vol. 90, Issue 10, pp. 1088-1095, (2020) ([PubMed](#)).
- Tarperi, Sanchis-Gomar, Montagnana, Danese, Salvagno, Gelati, Skroce, Schena, Lippi: "Effects of endurance exercise on serum concentration of calcitonin gene-related peptide (CGRP): a potential link between exercise intensity and headache." in: **Clinical chemistry and laboratory medicine**, Vol. 58, Issue 10, pp. 1707-1712, (2020) ([PubMed](#)).
- Pérez-Pereda, Toriello-Suárez, Ocejó-Vinyals, Guiral-Foz, Castillo-Obeso, Montes-Gómez, Martínez-Nieto, Iglesias, González-Quintanilla, Oterino: "Serum CGRP, VIP, and PACAP usefulness in migraine: a case-control study in chronic migraine patients in real clinical practice." in: **Molecular biology reports**, Vol. 47, Issue 9, pp. 7125-7138, (2020) ([PubMed](#)).
- Pinto-Sanchez, Hall, Ghajar, Nardelli, Bolino, Lau, Martin, Cominetti, Welsh, Rieder, Traynor, Gregory, De Palma, Pigrau, Ford, Macri, Berger, Bergonzelli, Surette, Collins, Moayyedi, Bercik: "Probiotic Bifidobacterium longum NCC3001 Reduces Depression Scores and Alters Brain Activity: A Pilot Study in Patients With Irritable Bowel Syndrome." in: **Gastroenterology**, Vol. 153, Issue 2, pp. 448-459.e8, (2017) ([PubMed](#)).
- Lei, Zhu, Zhang, Duan, Lei, Huang: "Transient Receptor Potential Vanilloid Subtype 1 Inhibits Inflammation and Apoptosis via the Release of Calcitonin Gene-Related Peptide in the Heart after Myocardial Infarction." in: **Cardiology**, Vol. 134, Issue 4, pp. 436-43, (2016) ([PubMed](#)).



**ELISA**

**Image 1.** Human Cystatin C PicoKine ELISA Kit standard curve