

Datasheet for ABIN2859312  
**KNG1 ELISA Kit**



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1 Image

## Overview

|                          |                |
|--------------------------|----------------|
| Quantity:                | 96 tests       |
| Target:                  | KNG1           |
| Binding Specificity:     | AA 19-644      |
| Reactivity:              | Human          |
| Method Type:             | Sandwich ELISA |
| Detection Range:         | 0.78-50 ng/mL  |
| Minimum Detection Limit: | 0.78 ng/mL     |
| Application:             | ELISA          |

## Product Details

|                             |   |
|-----------------------------|---|
| Purpose:                    | Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Kininogen-1 |
| Brand:                      | PicoKine™   |
| Sample Type:                | Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)                    |
| Analytical Method:          | Quantitative  |
| Detection Method:           | Colorimetric  |
| Immunogen:                  | Expression system for standard: NSO<br>Immunogen sequence: Q19-S644                 |
| Specificity:                | Expression system for standard: NSO<br>Immunogen sequence: Q19-S644                 |
| Cross-Reactivity (Details): | There is no detectable cross-reactivity with other relevant proteins.               |

## Product Details

Sensitivity: <20pg/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: KNG1

Alternative Name: KNG1 ([KNG1 Products](#))

Background: Protein Function: (1) Kininogens are inhibitors of thiol proteases, (2) HMW-kininogen plays an important role in blood coagulation by helping to position optimally prekallikrein and factor XI next to factor XII, (3) HMW-kininogen inhibits the thrombin- and plasmin- induced aggregation of thrombocytes, (4) the active peptide bradykinin that is released from HMW-kininogen shows a variety of physiological effects: (4A) influence in smooth muscle contraction, (4B) induction of hypotension, (4C) natriuresis and diuresis, (4D) decrease in blood glucose level, (4E) it is a mediator of inflammation and causes (4E1) increase in vascular permeability, (4E2) stimulation of nociceptors (4E3) release of other mediators of inflammation (e.g. prostaglandins), (4F) it has a cardioprotective effect (directly via bradykinin action, indirectly via endothelium-derived relaxing factor action), (5) LMW-kininogen inhibits the aggregation of thrombocytes, (6) LMW-kininogen is in contrast to HMW-kininogen not involved in blood clotting.

Background: Kininogen-1 (KNG1), also known as alpha-2-thiol proteinase inhibitor, Williams-Fitzgerald-Flaujeac factor or the HMWK-kallikrein factor, is a protein that in humans is encoded by the KNG1 gene. It is mapped to 3q27.3. The KNG1 gene uses alternative splicing to generate two different proteins " high " molecular - weight kininogen (HMWK) and low - molecular-weight kininogen (LMWK). HMWK is essential for blood coagulation and assembly of the kallikrein-kinin system. Also, bradykinin, a peptide causing numerous physiological effects, is released from HMWK. In contrast to HMWK, LMWK is not involved in blood coagulation. In addition to that, KNG1 is a constituent of the blood coagulation system as well as the kinin-kallikrein system.

Synonyms: Kininogen-1, Alpha-2-thiol proteinase inhibitor, Fitzgerald factor, High molecular weight kininogen, HMWK, Williams-Fitzgerald-Flaujeac factor, Kininogen-1 heavy chain, T-kinin, Ile-Ser-Bradykinin, Bradykinin, Kallidin I, Lysyl-bradykinin, Kallidin II, Kininogen-1 light chain, Low molecular weight growth-promoting factor, KNG1, BDK, KNG,

Full Gene Name: Kininogen-1

## Target Details

Cellular Localisation: Secreted, extracellular space.

Gene ID: 3827

UniProt: [P01042](#)

Pathways: [ACE Inhibitor Pathway](#), [Glycosaminoglycan Metabolic Process](#)

## 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.

Comment: Sequence similarities: Contains 3 cystatin kininogen-type domains.  
Tissue Specificity: Secreted in plasma. T-kinin is detected in malignant ovarian, colon and breast carcinomas, but not in benign tumors. .

Plate: Pre-coated

Protocol: human Kininogen-1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Kininogen-1 has been precoated onto 96-well plates. Standards(NSO, Q19-S644) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Kininogen-1 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 Kininogen-1 amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 50 ng/mL, 25 ng/mL, 12.5 ng/mL, 6.25 ng/mL, 3.12 ng/mL, 1.56 ng/mL, 0.78 ng/mL human Kininogen-1 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 or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each human Kininogen-1 standard solution and each sample is measured in duplicate.

Assay Precision:

- Sample 1: n=16, Mean(ng/ml): 8.5, Standard deviation: 0.323, CV(%): 3.8
- Sample 2: n=16, Mean(ng/ml): 14, Standard deviation: 0.658, CV(%): 4.7
- Sample 3: n=16, Mean(ng/ml): 28, Standard deviation: 1.54, CV(%): 5.5,
- Sample 1: n=24, Mean(ng/ml): 10, Standard deviation: 0.43, CV(%): 4.3
- Sample 2: n=24, Mean(ng/ml): 19, Standard deviation: 0.969, CV(%): 5.1
- Sample 3: n=24, Mean(ng/ml): 35, Standard deviation: 2.17, CV(%): 6.2

Application Details

Restrictions: For Research Use only

Handling

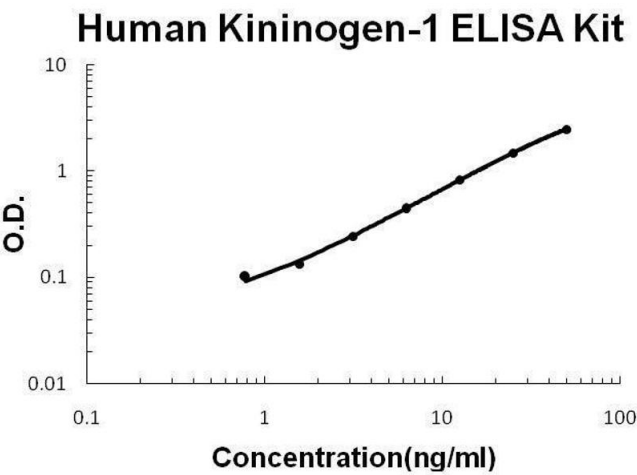
Handling Advice: Avoid multiple freeze-thaw cycles.

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

Expiry Date: 12 months

Images



**ELISA**

**Image 1.** Human Kininogen-1/KNG1 ELISA Kit standard curve