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Datasheet for ABIN411264

## EGF ELISA Kit

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### Overview

Quantity: 96 tests

Target: EGF

Binding Specificity: AA 971-1023

Reactivity: Human

Method Type: Sandwich ELISA

Detection Range: 4.7-300 pg/mL

Minimum Detection Limit: 4.7 pg/mL

Application: ELISA

### Product Details

Purpose: Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human EGF

Brand: PicoKine™

Sample Type: Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate), Urine

Analytical Method: Quantitative

Detection Method: Colorimetric

Immunogen: Expression system for standard: E.coli  
Immunogen sequence: N971-R1023

Specificity: Expression system for standard: E.coli  
Immunogen sequence: N971-R1023

Cross-Reactivity (Details): There is no detectable cross-reactivity with other relevant proteins.

## Product Details

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Sensitivity: <1pg/mL

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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

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## Target Details

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Target: EGF

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

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Background: Protein Function: EGF stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. Magnesiotropic hormone that stimulates magnesium reabsorption in the renal distal convoluted tubule via engagement of EGFR and activation of the magnesium channel TRPM6. Can induce neurite outgrowth in motoneurons of the pond snail *Lymnaea stagnalis* in vitro (PubMed:10964941). .

Background: Epidermal growth factor or EGF is a growth factor that plays an important role in the regulation of cell growth, proliferation, and differentiation by binding to its receptor EGFR. Human EGF is a 6045-Da protein with 53 amino acid residues and three intramolecular disulfide bonds. EGF acts by binding with high affinity to epidermal growth factor receptor(EGFR) on the cell surface and stimulating the intrinsic protein-tyrosine kinase activity of the receptor. EGF results in cellular proliferation, differentiation, and survival. It also has a profound effect on the differentiation of specific cells in vivo and is a potent mitogenic factor for a variety of cultured cells of both ectodermal and mesodermal origin. EGF has strong expression in kidney, salivary gland, cerebrum, and prostate, moderate expression in trachea and thyroid, and low expression in bone marrow, heart, spleen, thymus, uterus, and colon. No expression was detected in adrenal gland, liver, lung, cerebellum, placenta, and small intestine.

Synonyms: Pro-epidermal growth factor,EGF,Epidermal growth factor,Urogastrone,EGF,  
Full Gene Name: Pro-epidermal growth factor  
Cellular Localisation: Membrane, Single-pass type I membrane protein.

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Gene ID: 1950

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UniProt: [E7EVD2](#)

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Pathways: [NF-kappaB Signaling](#), [RTK Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Regulation of Carbohydrate Metabolic Process](#), [Hepatitis C](#), [Protein targeting to Nucleus](#), [Interaction of EGFR with phospholipase C-gamma](#),

## Target Details

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Thromboxane A2 Receptor Signaling, EGFR Downregulation

## Application Details

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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 9 EGF-like domains. Tissue Specificity: Expressed in kidney, salivary gland, cerebrum and prostate. .
Plate:	Pre-coated
Protocol:	human EGF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for EGF has been precoated onto 96-well plates. Standards(E.coli, N971-R1023) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for EGF 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 EGF amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 300pg/mL, 150pg/mL, 75pg/mL, 37.5pg/mL, 18.8pg/mL, 9.4pg/mL, 4.7pg/mL human EGF 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, citrate) or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human EGF standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(pg/ml): 42.1, Standard deviation: 1.98, CV(%): 4.7</li><li>• Sample 2: n=16, Mean(pg/ml): 105, Standard deviation: 5.67, CV(%): 5.4</li><li>• Sample 3: n=16, Mean(pg/ml): 197, Standard deviation: 6.30, CV(%): 3.2,</li><li>• Sample 1: n=24, Mean(pg/ml): 45.2, Standard deviation: 3.21, CV(%): 7.1</li><li>• Sample 2: n=24, Mean(pg/ml): 112, Standard deviation: 5.71, CV(%): 5.1</li><li>• Sample 3: n=24, Mean(pg/ml): 227, Standard deviation: 13.17, CV(%): 5.8</li></ul>
Restrictions:	For Research Use only

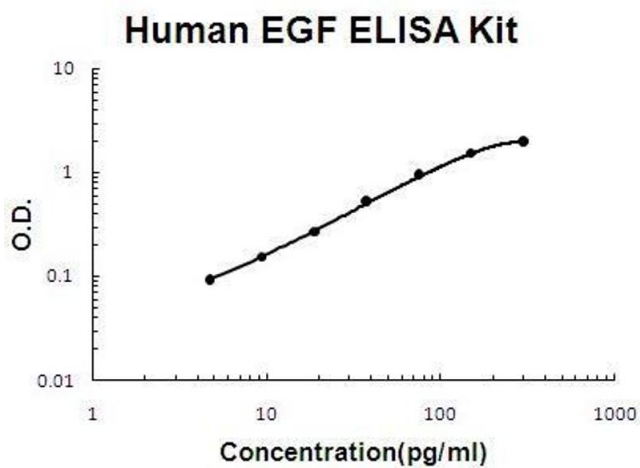
## Handling

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
Expiry Date:	12 months

## Publications

Product cited in: Agnes, Zekarias, Shao, Anderson, Gershwin, Corbeil: "Bovine respiratory syncytial virus and Histophilus somni interaction at the alveolar barrier." in: **Infection and immunity**, Vol. 81, Issue 7 , pp. 2592-7, (2013) ([PubMed](#)).

## Images



### ELISA

**Image 1.** Human EGF PicoKine ELISA Kit standard curve