

Datasheet for ABIN1672859

EGF ELISA Kit



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Overview

Quantity:	96 tests
Target:	EGF
Binding Specificity:	AA 974-1026
Reactivity:	Rat
Method Type:	Sandwich ELISA
Detection Range:	7.8-500 pg/mL
Minimum Detection Limit:	7.8 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Rat EGF
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Tissue Homogenate, Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: N974-R1026
Specificity:	Expression system for standard: E.coli Immunogen sequence: N974-R1026
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<1pg/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:	EGF
Alternative Name:	EGF (EGF Products)
Background:	<p>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 (By similarity). .</p> <p>Background: Epidermal growth factor(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. EGF locus is mapped to 4q21-4qter. Human EGF is a 6045-Da protein with 53 amino acid residues and three intramolecular disulfide bonds. EGF results in cellular proliferation, differentiation, and survival while plays a physiological role in the maintenance of oro-esophageal and gastric tissue integrity.</p> <p>Synonyms: Pro-epidermal growth factor,EGF,Epidermal growth factor,Egf,</p> <p>Full Gene Name: Pro-epidermal growth factor</p> <p>Cellular Localisation: Membrane, Single-pass type I membrane protein.</p>
Gene ID:	25313
UniProt:	P07522
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 , Thromboxane A2 Receptor Signaling , EGFR Downregulation

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:	Sequence similarities: Contains 9 EGF-like domains.
Plate:	Pre-coated
Protocol:	rat 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, N974-R1026) 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 rat EGF amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.3pg/mL, 15.6pg/mL, 7.8pg/mL rat 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 rat cell culture supernates, serum, plasma(heparin, EDTA), tissue homogenates or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each rat EGF standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 32.1, Standard deviation: 1.35, CV(%): 4.2• Sample 2: n=16, Mean(pg/ml): 104, Standard deviation: 5.62, CV(%): 5.4• Sample 3: n=16, Mean(pg/ml): 256, Standard deviation: 11.52, CV(%): 4.5,• Sample 1: n=24, Mean(pg/ml): 35.2, Standard deviation: 2.36, CV(%): 6.7• Sample 2: n=24, Mean(pg/ml): 112, Standard deviation: 8.4, CV(%): 7.5• Sample 3: n=24, Mean(pg/ml): 287, Standard deviation: 18.08, CV(%): 6.3
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: Du, Chen, Wang, Wen, Wang, Wang, Kan, Wei, Zhao: "VEGF-D-induced draining lymphatic enlargement and tumor lymphangiogenesis promote lymph node metastasis in a xenograft model of ovarian carcinoma." in: **Reproductive biology and endocrinology : RB&E**, Vol. 12, pp. 14, (2014) ([PubMed](#)).

Images

