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Epiregulin ELISA Kit



Image



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Overview

Quantity:	96 tests
Target:	Epiregulin (EREG)
Binding Specificity:	AA 53-101
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	125-8000 pg/mL
Minimum Detection Limit:	125 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse Epiregulin
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli
	Immunogen sequence: V53-L101
Specificity:	E.coli, V53-L101
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<10pg/mL

Product Details

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:	Epiregulin (EREG)
Alternative Name:	EREG (EREG Products)
Background:	Protein Function: Ligand of the EGF receptor/EGFR and ERBB4. Stimulates EGFR and ERBB4
	tyrosine phosphorylation (By similarity). Contributes to inflammation, wound healing, tissue
	repair, and oocyte maturation by regulating angiogenesis and vascular remodeling and by
	stimulating cell proliferation (PubMed:24631357)
	Background: Epiregulin (EPR) is a protein that in humans is encoded by the EREG gene. It is a
	member of the epidermal growth factor family. Epiregulin can function as a ligand of epidermal
	growth factor receptor (EGFR), as well as a ligand of most members of the ERBB (v-erb-b2
	oncogene homolog) family of tyrosine-kinase receptors. The secondary structure at the C-
	terminus epiregulin is different from other epidermal growth factor family ligands because of
	the lack of hydrogen bonds. The structural difference at the C-terminus may provide an
	explanation for the reduced binding affinity of epiregulin to the ERBB receptors.
	Synonyms: Proepiregulin,Epiregulin,EPR,Ereg,
	Full Gene Name: Proepiregulin
	Cellular Localisation: Epiregulin: Secreted, extracellular space.
Gene ID:	13874
UniProt:	Q61521
Pathways:	RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin
	Signaling Pathway, Regulation of Muscle Cell Differentiation

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.
Plate:	Pre-coated
Protocol:	mouse Epiregulin ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent

assay technology. A monoclonal antibody from rat specific for Epiregulin has been precoated
onto 96-well plates. Standards (E.coli, V53-L101) and test samples are added to the wells, a
biotinylated detection polyclonal antibody from goat specific for Epiregulin 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 mouse Epiregulin amount of sample captured in plate.

Assay Procedure:

Aliquot 0.1 mL per well of the 8000pg/mL, 4000pg/mL, 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL mouse Epiregulin 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 mouse cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each mouse Epiregulin standard solution and each sample be measured in duplicate.

Assay Precision:

- Sample 1: n=16, Mean(pg/ml): 1257, Standard deviation: 82.96, CV(%): 6.6
- Sample 2: n=16, Mean(pg/ml): 3204, Standard deviation: 189.03, CV(%): 5.9
- Sample 3: n=16, Mean(pg/ml): 5394, Standard deviation: 350.61, CV(%): 6.5,
- Sample 1: n=24, Mean(pg/ml): 1020, Standard deviation: 73.44, CV(%): 7.2
- Sample 2: n=24, Mean(pg/ml): 3562, Standard deviation: 23.865, CV(%): 6.7
- Sample 3: n=24, Mean(pg/ml): 4975, Standard deviation: 368.15, CV(%): 7.4

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

ELISA

Image 1. Mouse Epiregulin PicoKine ELISA Kit standard curve