Datasheet for ABIN625223

EGFR ELISA Kit

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Overview

Quantity:	96 tests
Target:	EGFR
Binding Specificity:	pTyr1068
Reactivity:	Human
Method Type:	Sandwich ELISA
Application:	ELISA

Product Details

Purpose:	Human Phospho-EGFR (Y1068) ELISA Kit. This assay semi-quantitatively measures phophorylated EGFR (Tyr1045) and Total EGFR in lysate samples.
Sample Type:	Cell Lysate, Tissue Lysate
Analytical Method:	Semi-Quantitative
Detection Method:	Colorimetric
Specificity:	The antibody pair provided in this kit recognizes human Phospho-EGFR (pTyr1068).
Characteristics:	• Rapidly measure phosphorylated protein in lysates • Screen numerous different cell lysates without performing a Western Blot analysis • Minimal hands-on time, convenient, and non-radioactive material
Components:	• Pre-Coated 96-well Strip Microplate • Wash Buffer • Anti-Phospho Antibody • HRP-Conjugated Secondary Antibody

Product Details

	• Assay Diluent • TMB One-Step Substrate • Stop Solution • Lysis Buffer • Positive Control Sample
Material not included:	• Distilled or deionized water • 100 mL and 1 liter graduated cylinders • Tubes to prepare sample dilutions • Protease and Phosphatase inhibitors • Precision pipettes to deliver 2 µL to 1 mL volumes • Adjustable 1-25 mL pipettes for reagent preparation • Benchtop rocker or shaker • Microplate reader capable of measuring absorbance at 450 nm

Target Details

Target:	EGFR
Alternative Name:	EGFR (EGFR Products)
Background:	EGFR-Y1068
Gene ID:	3236
UniProt:	P00533
Pathways:	NF-kappaB Signaling, RTK Signaling, Fc-epsilon Receptor Signaling Pathway, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Stem Cell Maintenance, Hepatitis C, Positive Regulation of Response to DNA Damage Stimulus, Interaction of EGFR with phospholipase C-gamma, Thromboxane A2 Receptor Signaling, EGFR Downregulation, S100 Proteins

Application Details

Sample Volume:	100 µL
Plate:	Pre-coated
Protocol:	1. Prepare all reagents and samples as instructed in the manual. 2. Add 100 µL of sample or positive control to each well. 3. Incubate 2.5 h at RT or O/N at 4 °C. 4. Add 100 µL of prepared primary antibody to each well. 5. Incubate 1 h at RT. 6. Add 100 µL of prepared 1X HRP-Streptavidin to each well.

	7. Incubate 1 h at RT. 8. Add 100 µL of TMB One-Step Substrate Reagent to each well. 9. Incubate 30 min at RT. 10. Add 50 µL of Stop Solution to each well. 11. Read at 450 nm immediately.
Reagent Preparation:	1. Bring all reagents and samples to room temperature (18 - 25 °C) before use. 2. Item D, Assay Diluent should be diluted 5-fold with deionized or distilled water before use. 3. Preparation of Positive Control: Briefly spin the Positive Control vial of Item K. Add 400 µL 1x Assay Diluent (Item E, Assay Diluent should be diluted 5-fold with deionized or distilled water before use) into Item K vial to prepare P-1 (See i. Positive control of part IX.for a typical result). Dissolve the powder thoroughly by a gentle mix (it can be removed by centrifuge if any precipitate in the solution is found). Pipette 300 µL 1x Assay Diluent into each tube. Add 100 µL prepared Positive Control P-1 into a tube with 300 µL 1x Asaay Diluent to produce a dilution series (shown below). Mix each tube thoroughly before the next transfer. 1x Assay Diluent serves as the background. Human Phospho-EGFR (Tyr 1068) ELISA Kit Protocol 6 4. If the Wash Concentrate (20x) (Item B) contains visible crystals, warm to room temperature and mix gently until dissolved. Dilute 20 mL of Wash Buffer Concentrate into deionized or distilled water to yield 400 mL of 1x Wash Buffer. 5. Briefly spin the anti-phospho-EGFR (Tyr 1068) (Item C) before use. Pipette up and down to mix gently. The anti- phospho-EGFR (Tyr 1068) should be diluted 1,000-fold with 1x Assay Diuent. For example, add 5 µL anti-phospho-EGFR (Tyr 1068) into a tube with 5.0 mL 1x Assay Diluent to prepare a 1,000-fold diluted antibody. 6. Briefly spin the HRP-conjugated anti-rabbit IgG (Item D-1) before use. Pipette up and down to mix gently. HRP-conjugated anti-rabbit IgG concentrate should be diluted 500-fold with 1x Assay Diuent. For example: Briefly spin the vial (Item D-1) and pipette up and down to mix gently. Add 10 µL of HRP-conjugated anti- rabbit IgG concentrate into a tube with 5.0 mL 1x Assay Diluent to prepare a 500-fold diluted HRP-conjugated anti- P (1) P (2) P (3) P (4) 0 100 µL Positive Control 400 µL 1x Assay Diluent 100µl 100 µL Human Phospho-EGFR (Tyr 1068) ELISA Kit Protocol 7 rabbit IgG solution. 7. Cell lysis buffer should be diluted 2-folds with deionized or distilled water before use (recommend to add protease and phosphatase inhibitors). VII.
Sample Preparation:	Cell lysates - Rinse cells with PBS, making sure to remove any remaining PBS before adding the lysis buffer. Solubilize cells at 2 x 107 cells/mL in 1x Lysis Buffer (we recommend adding protease and phosphatase inhibitors to lysis buffer prior to sample preparation). Pipette up and down to resuspend and incubate the lysates with shaking at 2 - 8° C for 30 minutes.

	Microcentrifuge at 13,000 rpm for 10 minutes at 2 - 8° C, and transfer the supernates into a clean test tube. Lysates should be used immediately or aliquoted and stored at -70 °C. Avoid repeated freeze-thaw cycles. Thawed lysates should be kept on ice prior to use. For the initial experiment, we recommend to do a serial dilution testing such as 5-fold and 50-fold dilution for your cell lysates with Assay Diluent (Item E) before use. Note: The fold dilution of sample used depends on the abundance of phosphorylated proteins and should be determined empiricallys. Human Phospho-EGFR (Tyr 1068) ELISA Kit Protocol 5 More of the sample can be used if signals are too weak. If signals are too strong, the sample can be diluted further. Cell lysis buffer should be diluted 2-fold with deionized or distilled water before use (recommend to add protease and phosphatase inhibitors).
Assay Procedure:	1. Bring all reagents to room temperature (18 - 25 °C) before use. It is recommended that all samples or Positive Control should be run at least in duplicate. 2. Add 100 µL of each sample or positive control into appropriate wells. Cover well with plate holder and incubate for 2.5 hours at room temperature or over night at 4 °C with shaking. 3. Discard the solution and wash 4 times with 1x Wash Solution. Wash by filling each well with Wash Buffer (300 µL) using a multi-channel Pipette or autowasher. Complete removal of liquid at each step is essential to good performance. After the last wash, remove any remaining Wash Buffer by aspirating or decanting. Invert the plate and blot it against clean paper towels. 4. Add 100 µL of prepared 1X primary antibody (Reagent Preparation step 5) to each well. Incubate for 1.5 hour at room temperature with shaking. 5. Discard the solution. Repeat the wash as in step3. Human Phospho-EGFR (Tyr 1068) ELISA Kit Protocol 8 6. Add 100 µL of prepared 1X secondary antibody solution (see Reagent Preparation step 6) to each well. Incubate for over night at 4 °C with shaking. 7. Discard the solution. Repeat the wash as in step3. 8. Add 100 µL of TMB One-Step Substrate Reagent (Item H) to each well. Incubate for 30 minutes at room temperature in the dark with shaking. 9. Add 50 µL of Stop Solution (Item I) to each well. Read at 450 nm immediately.
Calculation of Results:	ELISA data analysis: Average the duplicate readings for each sample or positive control then subtract the average blank optical density. i. Positive Control A431 cells were treated with recombinant human EGF at 37 °C for 10 min. Solubilize cells at 4 x 107 cells/mL in lysis buffer. Serial dilutions of lysates were analyzed in this ELISA. Please see step 3 of Part VI Reagent Preparation for detail. Assay Diluent Positive control O D = 4 5 0 n m 1 P (1) P(2) P(3) P(4) 0 - - 0.5 0 Human Phospho-EGFR (Tyr 1068) ELISA

Application Details

	Kit Protocol 10 ii. Recombinant Human EGF Stimulation of A431 Cell Lines A431 cells were treated or untreated with 100 ng/mL recombinant human EGF for 10 min. Cell lysates were analyzed using this phosphoELISA and Western Blot. ELISA Phospho-EGFR (Tyr1068) EGFR O D =4 50 n m 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 Untreated A431 EGF treated A431 Western-Blot hEGF 0 10 0 10 (Min) Anti-phospho-EGFR Anti-EGFR (Tyr1068) Human Phospho-EGFR (Tyr 1068) ELISA Kit Protocol 11 X
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid repeated freeze- thaw cycles.
Storage:	-20 °C
Storage Comment:	Upon receipt, the kit should be stored at -20 °C. Please use within 6 months from the date of shipment. After initial use, Wash Buffer Concentrate (Item B), Assay Diluent (Item E), TMB One-Step Substrate Reagent (Item H), HRP-Streptavidin (Item G), Stop Solution (Item I) and Cell Lysate Buffer (Item J) should be stored at 4 °C to avoid repeated freeze-thaw cycles. Return unused wells to the pouch containing desiccant pack, reseal along entire edge and store at -20 °C. Reconstituted Positive Control (Item K) should be stored at -70 °C.
Expiry Date:	6 months

Publications

Product cited in:	Nirala, Perumal, Gohil: "Glycated serum albumin stimulates expression of endothelial cell specific molecule-1 in human umbilical vein endothelial cells: Implication in diabetes mediated endothelial dysfunction." in: **Diabetes & vascular disease research**, Vol. 12, Issue 4, pp. 290-7, (2015) (PubMed). Nirala, Gohil: "Effect of garlic component s-allyl cysteine sulfoxide on glycated human serum albumin induced activation of endothelial cells: an in vitro study." in: **European review for medical and pharmacological sciences**, Vol. 19, Issue 11, pp. 2125-31, (2015) (PubMed). Bala, Gohil: "Interaction of glycated protein and DFO mimicked hypoxia in cellular responses of HUVECs." in: **Molecular bioSystems**, Vol. 8, Issue 10, pp. 2657-63, (2012) (PubMed).

Publications

Bala, Gomes, Gohil: "Interaction of glycated human serum albumin with endothelial cells in a hemodynamic environment: structural and functional correlates." in: **Molecular bioSystems**, Vol. 7, Issue 11, pp. 3036-41, (2012) (PubMed).

Chima, LaMontagne, Piraino, Hake, Denenberg, Zingarelli: "C-peptide, a novel inhibitor of lung inflammation following hemorrhagic shock." in: **American journal of physiology. Lung cellular and molecular physiology**, Vol. 300, Issue 5, pp. L730-9, (2011) (PubMed).

Images

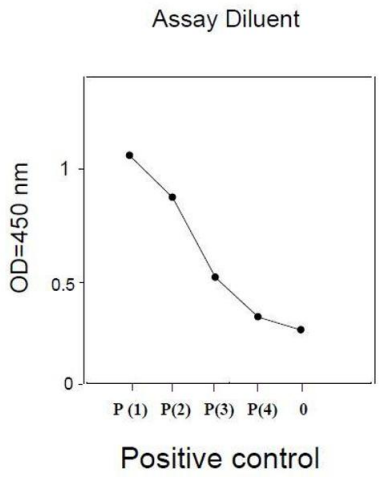


Image 1.

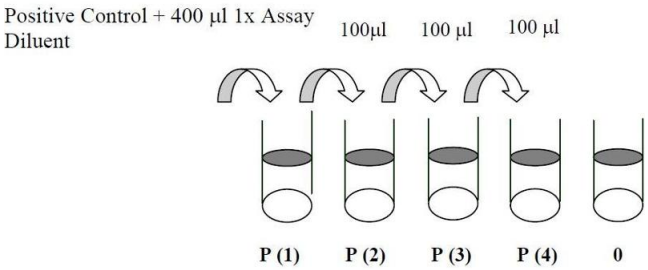
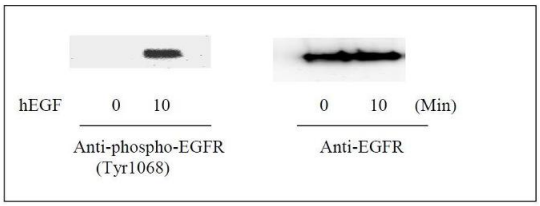


Image 2. This picture shows the preparation of the positive control.

Image 3.

Western-Blot



Please check the product details page for more images. Overall 4 images are available for ABIN625223.