

Datasheet for ABIN1981823
EGFR ELISA Kit



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Overview

Quantity:	96 tests
Target:	EGFR
Binding Specificity:	pTyr1086
Reactivity:	Human, Mouse, Rat
Method Type:	Cell ELISA
Application:	ELISA

Product Details

Purpose:	Cell-Based Human/Mouse/Rat EGFR (Tyr845) Phosphorylation ELISA Kit. Suitable for adherent whole cell lines.
Brand:	CellBIND®, RayBio®
Sample Type:	Cell Culture Cells
Analytical Method:	Semi-Quantitative
Detection Method:	Colorimetric
Specificity:	The antibodies provided in this kit recognizes human, mouse and rat EGFR phosphorylated at site Tyrosine-845 and total EGFR for comparison.
Characteristics:	<ul style="list-style-type: none">• Site and signal pathway-specific• In vitro detection of adherent cell culture• No sample lysis needed• Compatible with a standard ELISA plate reader• Faster results than with ELISA• Adaptable for high-throughput screening and drug discovery

Product Details

Components:	<ul style="list-style-type: none">• uncoated 96-well Microplate• Wash Buffer A• Wash Buffer B• Fixing Solution• Quenching Buffer• Blocking Buffer• Anti-phospho antibody• Anti-pan antibody• HRP-Conjugated Secondary Antibody• TMB One-Step Substrate• Stop Solution
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Material not included:	<ul style="list-style-type: none">• 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
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Target Details

Target:	EGFR
Alternative Name:	EGFR (EGFR Products)
Gene ID:	1956
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 μ L
Plate:	Uncoated
Protocol:	<ol style="list-style-type: none">1. Seed 10,000-30,000 cells into each well and incubate overnight.2. Apply various treatment, inhibitors or activators according to manufacture's instructions.

3. Add 100 μ L of Fixing Solution into each well and incubate for 20 min at RT with shaking.
4. Add 200 μ L of prepared 1X Quenching Buffer and incubate 20 min at RT.
5. Add 200 μ L of Blocking Solution and incubate for 1 h at 37 °C.
6. Add 50 μ L of 1X anti-phospho-protein specific antibody or anti-pan-protein specific antibody to each well and incubate for 2 h at RT.
7. Add 50 μ L of prepared 1X HRP-Anti-Rabbit or Mouse IgG and incubate for 1 h at RT.
8. Add 100 μ L of TMB One-Step Substrate Reagent to each well.
9. Incubate 30 min at RT.
10. Add 50 μ L of Stop Solution to each well.
11. Read at 450 nm immediately.

Reagent Preparation: NOTE: Thaw all reagents to room temperature immediately before use. If wash buffers contain visible crystals, warm to room temperature and mix gently until dissolved.

NOTE: Briefly centrifuge (~1,000g) ITEMS G, H, and I before opening to ensure maximum recovery.

For more information look at the picture.

Assay Procedure: NOTE: ALL incubations and wash steps must be performed under gentle rocking or rotation (~1-2 cycles/sec).

1. Design your experiment. For example, see in Figure 2 below.

OPTIONAL: If seeding HUVECs, HMEC-1 or other loosely attached cells, coat the Uncoated 96-Well Microplate (ITEM A) by adding 100 μ L poly-L-Lysine (Recommended Sigma Aldrich) into each well and then follow manufacturer's instructions. A pre-coated CellBIND® microplate or other poly-lysine treated tissue culture plate may be used in place of Item A.

2. Seed 100 μ L of 30,000 cells into each well of the Uncoated 96-Well Microplate (ITEM A) provided and incubate overnight at 37 °C with 5 % CO₂.

NOTE: The optimal cell number used will vary on the cell line and the relative amount of protein phosphorylation. More or less cells may be used but this must be determined empirically.

NOTE: The cells can be starved ~4-24 hours (depending on cell line) prior to treatment with inhibitors or activators.

3. Apply various treatments, inhibitors (such as siRNA or chemicals) or activators according to manufacturer's instructions and incubate for the desired time points.

NOTE: It is recommended to dissolve inhibitors or activators into serum-free cell culture medium before treating the cells (unless otherwise stated in the manufacturer's instructions.)

4. Discard the cell culture medium by flipping the microplate upside down and gently tapping the bottom of the microplate over a sink.
5. Wash by pipetting 200 μ L of the prepared 1X Wash Buffer A (ITEM B) into each well. Discard the wash buffer (same as step 4) and wash 2 more times for a total of 3 washes using fresh

Application Details

wash buffer each time. After the final wash, gently blot the microplate onto a paper towel to remove any excess/remaining buffer.

NOTE: To avoid cell loss, do not pipette directly onto the cells. Instead, gently dispense the liquid down the wall of cell culture wells. Also avoid the use of vacuum suction or too forcefully tapping the microplate when discarding any solution.

6. Add 100 μ L of Fixing Solution (ITEM D) into each well and incubate for 20 minutes at room temperature.

NOTE: The fixing solution is used to permeabilize the cells.

7. Repeat wash step 5.

8. Add 200 μ L of the prepared 1X Quenching Buffer (ITEM E) into each well and incubate 20 minutes at room temperature.

NOTE: The quenching buffer is used to minimize the background response.

9. Wash 4 times with 1X Wash Buffer A.

10. Add 200 μ L of the prepared 1X Blocking Buffer (ITEM F) into each well and incubate for 1 hour at 37 °C.

11. Wash 3 times with the prepared 1X Wash Buffer B (ITEM C).

NOTE: If needed, the microplate may be stored at -80 °C for several days after this wash.

12. Add 50 μ L of the prepared 1X primary antibody (ITEM G or H) into each corresponding well and incubate for 2 hours at room temperature.

13. Wash 4 times with 1X Wash Buffer B.

14. Add 50 μ L of 1X HRP Conjugated secondary antibody (ITEM I) into each well and incubate for 1 hour at room temperature.

15. Wash 4 times with 1X Wash Buffer B.

16. Add 100 μ L of the TMB Substrate (ITEM J) into each well and incubate for 30 minutes at room temperature in the dark.

17. Add 50 μ L of the Stop Solution (ITEM K) into each well. Read at 450 nm immediately.

Restrictions: For Research Use only

Handling

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -20 °C

Storage Comment: The entire kit may be stored at -20°C for up to 6 months from the date of shipment. Avoid repeated freeze-thaw cycles.

Expiry Date: 6 months

Product cited in: Biscardi, Maa, Tice, Cox, Leu, Parsons: "c-Src-mediated phosphorylation of the epidermal growth factor receptor on Tyr845 and Tyr1101 is associated with modulation of receptor function." in: **The Journal of biological chemistry**, Vol. 274, Issue 12, pp. 8335-43, (1999) ([PubMed](#)).

Hackel, Zwick, Prenzel, Ullrich: "Epidermal growth factor receptors: critical mediators of multiple receptor pathways." in: **Current opinion in cell biology**, Vol. 11, Issue 2, pp. 184-9, (1999) ([PubMed](#)).

Zwick, Hackel, Prenzel, Ullrich: "The EGF receptor as central transducer of heterologous signalling systems." in: **Trends in pharmacological sciences**, Vol. 20, Issue 10, pp. 408-12, (1999) ([PubMed](#)).

Hubbard, Wei, Ellis, Hendrickson: "Crystal structure of the tyrosine kinase domain of the human insulin receptor." in: **Nature**, Vol. 372, Issue 6508, pp. 746-54, (1995) ([PubMed](#)).