Product datasheet

Human EGFR ELISA Kit (ERBB) ab100505

Overview

Product name: Human EGFR ELISA Kit (ERBB)
Detection method: Colorimetric
Sample type: Cell culture supernatant, Serum, Plasma
Assay type: Sandwich (quantitative)
Sensitivity: < 4 pg/ml
Range: 2.74 pg/ml - 2000 pg/ml
Recovery: > 85%

Sample specific recovery

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell culture supernatant</td>
<td>85.65</td>
<td>72% - 96%</td>
</tr>
<tr>
<td>Serum</td>
<td>105.4</td>
<td>94% - 116%</td>
</tr>
<tr>
<td>Plasma</td>
<td>107.2</td>
<td>96% - 119%</td>
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</tbody>
</table>

Assay duration: Multiple steps standard assay
Species reactivity: Reacts with: Human

Product overview

Abcam’s EGFR (ERBB) Human ELISA (Enzyme-Linked Immunosorbent Assay) kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of Human EGFR in serum, plasma, and cell culture supernatants.

This assay employs an antibody specific for Human EGFR coated on a 96-well plate. Standards and samples are pipetted into the wells and EGFR present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated antiHuman EGFR antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of EGFR bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

Get higher sensitivity in only 90 minutes with Human soluble EGFR ELISA Kit (ab193764) from our SimpleStep ELISA® range.
Notes
Optimisation may be required with urine samples.

Platform
Microplate

Properties

Storage instructions
Store at -20°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>20X Wash Buffer</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>300X HRP-Streptavidin Concentrate</td>
<td>1 x 200µl</td>
</tr>
<tr>
<td>5X Assay Diluent B</td>
<td>1 x 15ml</td>
</tr>
<tr>
<td>Assay Diluent A</td>
<td>1 x 30ml</td>
</tr>
<tr>
<td>Biotinylated anti-Human EGFR</td>
<td>2 vials</td>
</tr>
<tr>
<td>EGFR Microplate (12 x 8 well strips)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Recombinant Human EGFR Standard (lyophilized)</td>
<td>2 vials</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 8ml</td>
</tr>
<tr>
<td>TMB One-Step Substrate Reagent</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>

Function
Receptor for EGF, but also for other members of the EGF family, as TGF-alpha, amphiregulin, betacellulin, heparin-binding EGF-like growth factor, GP30 and vaccinia virus growth factor. Is involved in the control of cell growth and differentiation. Phosphorylates MUC1 in breast cancer cells and increases the interaction of MUC1 with SRC and CTNNB1/beta-catenin. Isoform 2 may act as an antagonist of EGF action.

Tissue specificity
Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

Involvement in disease
Defects in EGFR are associated with lung cancer (LNCR) [MIM:211980].

Sequence similarities
Belongs to the protein kinase superfamily. Tyr protein kinase family. EGF receptor subfamily. Contains 1 protein kinase domain.

Post-translational modifications
Phosphorylation of Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occur.

Cellular localization

Images
EGFR measured in cell lysates showing quantity (ng) per 1 million cells.

Representative Standard Curve using ab100505.

EGFR measured in various fluids showing quantity (ng) per mL of tested sample.
Representative Standard Curve using ab100505.

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