Revision 1

Store at +4C

#8667

SignalKine™ Human EGF Sandwich ELISA Kit

1 Kit ((96 assays) Low Volume Microplate)

Species Cross Reactivity: H
UniProt ID: #P01133
Entrez-Gene Id: #1950

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Color	Storage Temp
ELISA Wash Buffer (20X)	9801	25 ml	Colorless	+4C
TMB Substrate	7004	6 ml	Colorless	+4C
STOP Solution	7002	6 ml	Colorless	+4C
Sealing Tape	54503	2 ea		+4C

Kit contents scale proportionally with size, except sealing tape.
Example: The V1 kit contains 5X the listed quantities above, but will exclude the sealing tape.

The microwell plate is supplied as 12 8-well modules - Each module is designed to break apart for 8 tests.

Description

SignalKine™ Human EGF Sandwich ELISA Kit from Cell Signaling Technology (CST) is a solid phase sandwich enzyme-linked immunosorbent assay (ELISA) that detects human EGF (hEGF) in multiple matrices. Unknown samples being tested for hEGF and hEGF Standards are added to low volume microwells, where the hEGF is captured by the coated hEGF Rabbit mAb. Following a washing step, a biotinylated hEGF Rabbit mAb is added to detect the captured hEGF. HRP-linked Streptavidin is then used for detection of the biotinylated hEGF Detection Rabbit mAb. HRP substrate, TMB, is added for color development. The magnitude of absorbance for this developed color is proportional to the quantity of EGF in the sample.

SignalKine™ Human EGF Sandwich ELISA Kit detects hEGF in multiple matrices that be quantified by generating a standard curve with the recombinant hEGF protein standard provided. The hEGF standard range is from 3.9 to 250 pg/ml. Samples containing higher levels of hEGF can be diluted to fit into the standard range.

Background

Epidermal growth factor (EGF) is a small polypeptide hormone that has mitogenic properties, *in vivo* and *in vitro,* and affects the growth and/or differentiation of many cell types. EGF elicits biologic responses by binding to its cell surface receptor, which is a transmembrane glycoprotein containing a cytoplasmic protein tyrosine kinase (1,2). The binding of EGF to the EGF receptor promotes dimerization of the receptor, autophosphorylation, and activation of downstream signaling components (3). The integrated biological responses to EGF signaling are pleiotropic including mitogenesis, apoptosis, enhanced cell motility, protein secretion, differentiation, and dedifferentiation. In addition to being implicated in organ morphogenesis, maintenance, and repair, research studies have correlated upregulated EGF receptor signaling with progression to invasion and metastisis in a wide variety of tumors (4-6). Thus, investigators have identified EGF receptor and its downstream signaling molecules as potential targets for therapeutic interventions in wound repair and cancer (4-6).

Background References

1. Wells, A. (1999) *Int J Biochem Cell Biol* 31, 637-43.
2. Boulougouris, P. and Elder, J. *Anticancer Res* 21, 2769-75.
3. Schlessinger, J. (2002) *Cell* 110, 669-72.
4. Sarries, C. et al. (2002) *Pharmacogenomics* 3, 763-80.
5. Lorimer, I.A. (2002) *Curr Cancer Drug Targets* 2, 91-102.
6. Ghaneh, P. et al. (2002) *J Hepatobiliary Pancreat Surg* 9, 1-11.

Trademarks and Patents

Limited Uses

force or effect.

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