

DESCRIPTION

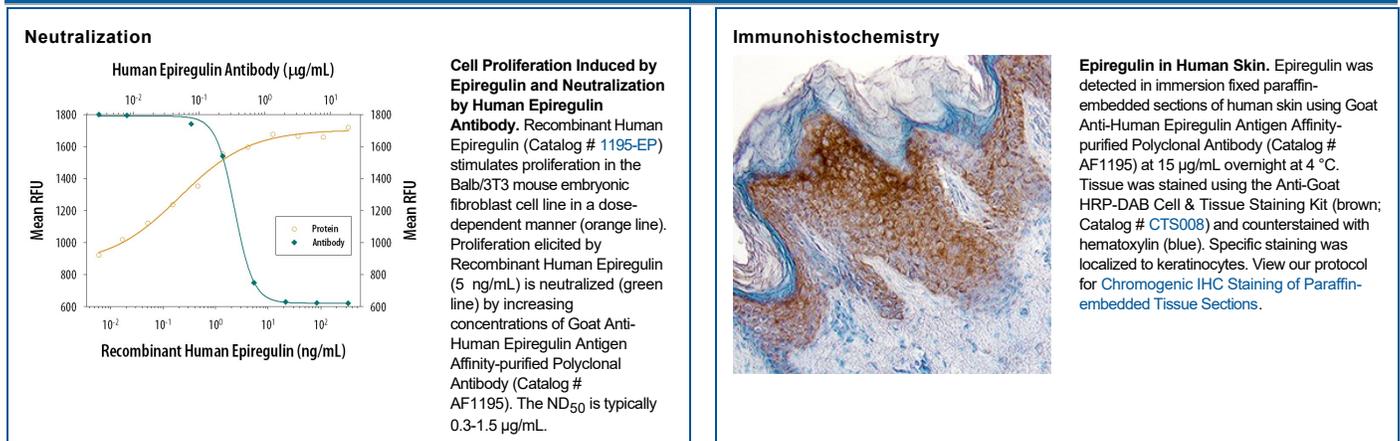
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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human Epiregulin in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant mouse Epiregulin is observed. |
| Source | Polyclonal Goat IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human Epiregulin (R&D Systems, Catalog # 1195-EP) Val63-Leu108 Accession # O14944 |
| Endotoxin Level | <0.10 EU per 1 µg of the antibody by the LAL method. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

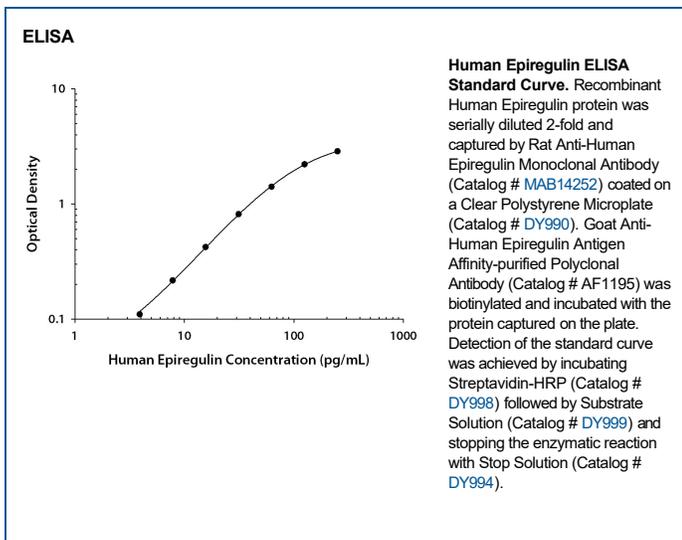
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

| | Recommended Concentration | Sample |
|-----------------------------|--|--|
| Western Blot | 0.1 µg/mL | Recombinant Human Epiregulin (Catalog # 1195-EP) |
| Immunohistochemistry | 5-15 µg/mL | See Below |
| Neutralization | Measured by its ability to neutralize Epiregulin-induced proliferation in the Balb/3T3 mouse embryonic fibroblast cell line. The Neutralization Dose (ND ₅₀) is typically 0.3-1.5 µg/mL in the presence of 5 ng/mL Recombinant Human Epiregulin. | |
| ELISA | This antibody functions as an ELISA detection antibody when paired with Rat Anti-Human Epiregulin Monoclonal Antibody (Catalog # MAB14252). <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Epiregulin DuoSet ELISA Kit (Catalog # DY1195-05) for convenient development of a sandwich ELISA.</i> | |

DATA





PREPARATION AND STORAGE

| | |
|--------------------------------|---|
| Reconstitution | Reconstitute at 0.2 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | <p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

Epregrulin is a member of the EGF family of growth factors which includes, among others, epidermal growth factor (EGF), transforming growth factor (TGF)-alpha, amphiregrulin (ARG), HB (heparin-binding)-EGF, betacellulin, and the various heregulins. All EGF family members are synthesized as transmembrane precursors and are converted to soluble forms by proteolytic cleavage. Epregrulin was originally purified from the mouse fibroblast-derived tumor cell line NIH3T3/T7. The human epregrulin cDNA encodes a 169 amino acid (aa) residues transmembrane precursor with a 29 aa signal peptide, a 21 aa transmembrane domain and a 21 aa cytoplasmic domain. The putative soluble mature Epregrulin comprising the EGF-like domain (aa residues 64-104) is formed by proteolytic removal of the propeptide regions. There is 85% aa sequence homology between human and mouse epregrulins. Epregrulin is expressed primarily in the placenta and macrophages. High level expression has also been detected in various carcinomas. Epregrulin specifically binds EGF R (ErbB1) and ErbB4 but not ErbB2 and ErbB3. It activates the homodimers of both ErbB1 and ErbB4. In addition, epregrulin can also activate all possible heteromeric combinations of the four ErbB family members. Epregrulin stimulates the proliferation of fibroblasts, smooth muscle cells and hepatocytes. It has been shown to be an autocrine growth factor for epidermal keratinocytes as well as mesangial cells. Epregrulin has also been shown to inhibit growth of several epithelial tumor cells. In addition, Epregrulin has been implicated in the implantation process during pregnancy.