



Genesis Biotech Inc.

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Anti-EGF, Rabbit-Polyclonal Antibody

Catalog No. GB10357 **Quantity:** 100 μ l **Antigen species:** Human **Reactivity:** Human, rat, mouse **Applications tested:** Western Blot, ELISA **Host species:** rabbit
Type: polyclonal antibody **Form:** crude antiserum

Target description

The epidermal growth factor (EGF) gene, on porcine chromosome 8, may influence uterine capacity because of its growth-promoting activities. The predicted protein sequence of the porcine EGF precursor contained 1214 amino acids, similar to human EGF precursor (1207 amino acids, 81% identity). Curiously, the sequence of the mature peptide was less homologous between species than other regions of EGF precursor. The presence of conserved regions outside the mature peptide may suggest that these regions are functionally important. Human EGF regulates cell proliferation and differentiation by binding to the EGF receptor (EGFR) extracellular region, comprising domains I-IV, with the resultant dimerization of the receptor tyrosine kinase. The crystal structure of a 2:2 complex of human EGF and the EGFR extracellular region has been determined at 3.3 Å resolution. EGFR domains I-III are arranged in a C shape, and EGF is docked between domains I and III. The 1:1 EGF*EGFR complex dimerizes through a direct receptor*receptor interaction, in which a protruding beta-hairpin arm of each domain II holds the body of the other. The unique "receptor-mediated dimerization" was verified by EGFR mutagenesis.

Antigen

This polyclonal antibody was raised by immunizing rabbit with synthetic peptide located within the C-terminal two third of mature chain of porcine EGF (aa 1-53), which is equivalent with the aa 970-1022 of proEGF precursor.

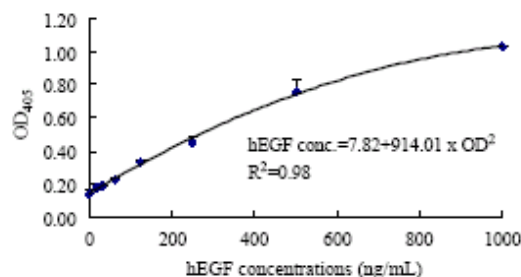
Application

The antibody specificity was assayed by dot blot analysis with the synthetic peptide, and Western blot analysis with recombinant human EGF. The anti-porcine EGF antibody can cross react with human counterpart (human mature EGF). The antibody titer is more than 10K for Dot blot analysis. It has not been tested in the other applications. However, for the first testing, we recommend 1/5000 dilution for ELISA, 1/1000 dilution for WB of recombinant protein, 1/400 dilution for tissue extracts or cell lysates, 1/100 dilution for immunohistochemistry (IHC) staining on frozen cryosections, 1/50 dilution for IHC staining on paraffin embedded sections.

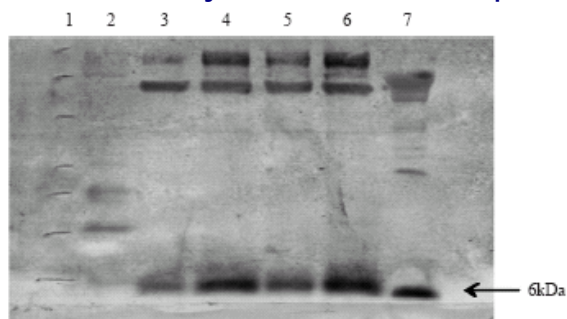
Related Products

1. Anti-VEGF, Rabbit pAb (GB-10050)
2. Anti-VEGFR-3, Rabbit pAb (GB-30015).
3. Anti-prothymosin 1, Rabbit pAb (GB-30019)
4. Anti-TEM8 pAb (GB-10009).
5. Anti-PRL-3 rabbit mAb (GB-63023).
6. Anti-FLJ23603 rabbit mAb (GB-63024).
7. Anti-FLJ23603 pAb (GB-30024).
8. Anti-ZD52F10 pAb (GB-30025).
9. Anti-LOC54675 pAb (GB-30032).

The standard curve of rabbit anti-pEGF serum



Western-blot analysis of the recombinant pEGF



- Lane 1 the molecular-weight markers
Lane 2 the culture supernatant from the untransformed strain
Lane 3 and 4 were the culture supernatant from transformed loaded 5 and 10 μ L/well, respectively.
Lane 5 and 6 were the culture supernatant from transformed loaded 5 and 10 μ L/well, respectively.
Lane 7 standard hEGF.

The recombinant pEGF is marked by an arrowhead

Storage

It is supplied as lyophilized polyclonal antibody. Rehydrate the powder with 100 μ l sterile water will restore the original concentration. Store at 4°C for short-term application. For long-term storage, aliquot and store at -20°C.

References

1. Der-Nan Lee a, Tsun-Yung Kuo, Ming-Cheng Chen, Tsung-Yin Tang, Fu-Hwa Liu, Ching-Feng Weng Expression of porcine epidermal growth factor in *Pichia pastoris* and its biology activity in early-weaned piglets. *Life Sciences* 78 649 – 654(2006)
2. Kim, J.G., Vallet, J.L. and Christenson, R.K. Characterization of uterine epidermal growth factor during early pregnancy in pigs. *Domest. Anim. Endocrinol.* 20 (4), 253-265 (2001)
3. Ogiso, H., Ishitani, R., Nureki, O., Fukai, S., Yamanaka, M., Kim, J.H., Saito, K., Sakamoto, A., Inoue, M., Shirouzu, M. and Yokoyama, S. Crystal structure of the complex of human epidermal growth factor and receptor extracellular domains. *Cell* 110 (6), 775-787 (2002)

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