



20150720BB

Anti-Human Epiregulin (#12Y4)

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

Cat.-no.:	101-M394
Size:	100 µg
Lot. No.:	According to product label

Preparation: This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a mouse) immunized with human recombinant Epiregulin.

Target Background

Synonyms (Target):	EREG; ER
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Epiregulin is a member of the EGF family of growth factors which includes, among others, epidermal growth factor (EGF), transforming growth factor (TGF)alpha, amphiregulin (ARG), HB (heparinbinding) EGF, betacellulin, and the various heregulins. All EGF family members are synthesized as transmembrane precursors and are converted to soluble forms by proteolytic cleavage. Epiregulin was originally purified from the mouse fibroblast-derived tumor cell line NIH3T3/T7. The human epiregulin 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 Epiregulin comprising the EGFlike domain (aa residues 64-104) is formed by proteolytic removal of the propeptide regions. There is 85% aa sequence homology between human and mouse epiregulins. Epiregulin is expressed primarily in the placenta and macrophages. High level expression has also been detected in various carcinomas. Epiregulin specifically binds EGFR (ErbB1) and ErbB4 but not ErbB2 and ErbB3. It activates the homodimers of both ErbB1 and ErbB4. In addition, epiregulin can also activate all possible heteromeric combinations of the four ErbB family members. Epiregulin 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.

Database References Target

Protein RefSeq:	NP_001423
Uniprot ID:	O14944
mRNA RefSeq:	NM_001432

Product Specifications

Host	Mouse
Reactivity against	Human
Clonality	Monoclonal Antibody
Clone	(#12Y4)
Isotype	IgG1
Purification	Protein G chromatography
Antigen	recombinant human Epiregulin
Formulation	lyophilized
Reconstitution buffer	PBS (sterile)

Reconstitution: Reconstitute the antibody with 200 µl sterile PBS and the final concentration is 500 µg/ml.

Stability: Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20 °C for at least for six months without detectable loss of activity.

Remarks: This antibody was selected for its ability to detect human Epiregulin.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Applications

The antibody can be used within the following applications:

WB, IHC (P)

Recommended usage:

Western Blot: 1:500 - 1:1000

IHC (Paraffin): Yes

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Application/Handling

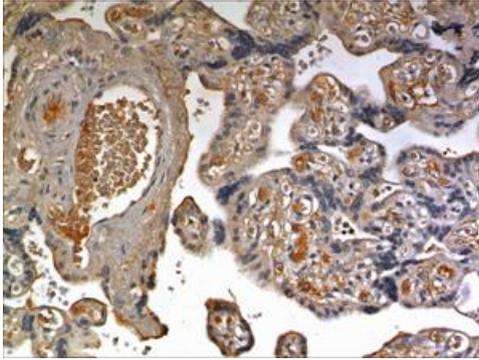


Fig. 1: A 10% Buffer formalin fixed and paraffin embedded human placental tissue section (4um) is subjected to IHC staining using a mouse anti-human Epiregulin monoclonal antibody. Tissue section was pretreated in citric buffer (ph6.0) with microwave for antigen retrieval before IHC is applied.