

#### DESCRIPTION

|                           |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Mouse  |
| <b>Specificity</b>        | Detects mouse Epigen in direct ELISAs and Western blots.                                 |
| <b>Source</b>             | Polyclonal Goat IgG  |
| <b>Purification</b>       | Antigen Affinity-purified  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse Epigen<br>Leu53-Ala103<br>Accession # Q924X1.1 |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.                       |

#### 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.

|                             | <b>Recommended Concentration</b> | <b>Sample</b>   |
|-----------------------------|----------------------------------|---|
| <b>Western Blot</b>         | 0.1 µg/mL                        | Recombinant Mouse Epigen (Catalog # 1127-EP)                |
| <b>Immunohistochemistry</b> | 5-15 µg/mL                       | Perfusion fixed frozen sections of mouse intestine and skin |

#### PREPARATION AND STORAGE

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

#### BACKGROUND

Epigen is an epithelial mitogen that belongs to the EGF superfamily (1). Mouse Epigen cDNA encodes a 153 amino acid (aa) residue type I transmembrane precursor protein with a 18 aa putative signal peptide, a 92 aa extracellular domain, a 20 aa transmembrane domain, and a 22 aa cytoplasmic domain. Expression of mouse Epigen has been detected in multiple tissues including testis, liver and heart. Over the entire protein, mouse Epigen shares from approximately 23-33% sequence homology with other EGF family members. The functional internal peptide containing the EGF motif however is more than 40% homologous with that of TGF-α and epiregulin. A human cDNA clone encoding a mouse epigen-like protein has also been identified (2). Similarly to other EGF family proteins, a soluble form of mouse Epigen can most likely be generated from the membrane-bound form by proteolytic cleavage. Although recombinant mouse Epigen has been shown to be mitogenic for fibroblasts (3) and epithelial cells (1), compared to EGF and TGF-α, it is much less potent. The EGF receptor ErbB1 can be activated upon mouse Epigen activation. Nevertheless, involvements of additional ErbB receptors in mouse Epigen signaling have not been ruled out.

#### References:

1. Strachan, L. *et al.* (2001) J. Biol. Chem. **276**:18265.
2. Accession XM\_171078.
3. R&D Systems; unpublished results.

#### PRODUCT SPECIFIC NOTICES

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