

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse Epigen in ELISAs.                                                                                                                                                                                                                                             |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2A</sub> Clone # 187204                                                                                                                                                                                                                             |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse Epigen<br>Leu53-Ala103<br>Accession # Q924X1.1                                                                                                                                                                                    |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## 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>ELISA Capture (Matched Antibody Pair)</b>   | Optimal dilution of this antibody should be experimentally determined. |
| <b>ELISA Detection (Matched Antibody Pair)</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Epigen (EPGN) is an epithelial mitogen that belongs to the EGF superfamily (1-3). Mouse Epigen cDNA encodes a 152 amino acid (aa) residue type I transmembrane precursor protein with a 23 aa putative signal peptide, an 86 aa extracellular domain, a 21 aa transmembrane domain and a 22 aa cytoplasmic domain (2, 3). The extracellular domain (aa 24-109) contains a pattern of six cysteines typical of EGF family proteins (1-3). Epigen is among several EGF family proteins that can undergo metalloproteinase cleavage to generate a soluble form (3, 4). Cleavage of Epigen by TACE/ADAM17 has been demonstrated (4). The mature, shed form of mouse Epigen (aa 53-103) shares 92%, 96% and 90% aa sequence identity with human, rat and equine Epigen, respectively, and more than 40% aa identity with corresponding regions of TGF- $\alpha$  and epiregulin (2). Epigen mRNA is found in many tissues, but it is mainly expressed in actively proliferating cells within these tissues. For example, Epigen in skin is found mainly in the proliferating root sheath of hair follicles, and transgenic overexpression in the skin causes hyperplasia in sebaceous glands (3, 5). Epigen is also expressed developmentally and by invasive adenocarcinomas of the breast and prostate (3). Epigen is strongly mitogenic for epithelial cells and fibroblasts, despite its relatively weak affinity for its main receptor, ErbB1 (2, 3). The mitogenic potential of Epigen is enhanced by its unusually long persistence on the membrane before ubiquitylation and receptor-mediated depletion (3).

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