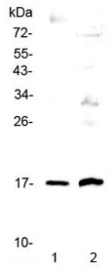
Epigen Antibody / Epithelial Mitogen Antibody (R32987)

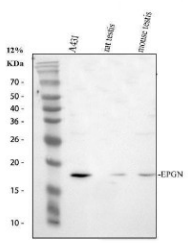
Catalog No.	Formulation	Size
R32987	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6UW88
Applications	Western Blot: 0.5-1ug/ml
Limitations	This Epigen Antibody / Epithelial Mitogen Antibody is available for research use only.



Epigen Antibody A431 and PC-12 Cell WB. Western blot analysis was performed using human A431 epithelial cell lysate in lane 1 and rat PC-12 cell lysate in lane 2. The membrane was incubated with Epigen antibody at 0.5 ug/ml. A distinct band was detected at approximately 17 kDa in both samples, matching the predicted molecular weight of the Epigen precursor protein. The results demonstrate recognition of endogenous Epigen in human and rat cell lysates. Epigen Antibody, an epithelial mitogen antibody, supports cross-species studies of EPGN expression, epithelial proliferation and EGFR ligand signaling.



Epigen Antibody Human Cell and Rodent Testis WB. Western blot analysis was performed under reducing conditions using 30 ug of lysate per lane. Lane 1: human A431 cells; Lane 2: rat testis tissue; Lane 3: mouse testis tissue. The membrane was incubated overnight at 4Â°C with rabbit anti-Epigen antibody at 0.5 ug/ml, followed by an HRP-conjugated goat anti-rabbit IgG secondary antibody and ECL detection. A specific band was observed at approximately 17 kDa in all three samples, matching the expected molecular weight of Epigen. Epigen Antibody, an epithelial mitogen antibody, supports analysis of EPGN expression in human, rat and mouse samples.

Description

Epigen Antibody recognizes Epigen, a member of the epidermal growth factor family encoded by the EPGN gene. Also known as epithelial mitogen, Epigen functions as a ligand for the epidermal growth factor receptor and promotes the growth of epithelial cells. The protein is initially synthesized as a membrane-associated precursor containing an extracellular EGF-like domain, a transmembrane region and a short cytoplasmic segment. Proteolytic processing can release a soluble form of the ligand, allowing Epigen to participate in autocrine or paracrine signaling. Binding of Epigen to EGFR stimulates receptor activation and can initiate downstream pathways involved in proliferation, survival and cellular differentiation.

Epigen is considered a relatively low-affinity EGFR ligand, but ligand affinity alone does not determine the magnitude of its biological activity. Epigen can produce sustained receptor signaling and potent mitogenic effects in responsive epithelial cells. Following ligand binding, EGFR undergoes dimerization and phosphorylation, creating docking sites for intracellular signaling proteins. These events can activate the RAS-MAPK, PI3K-AKT and other pathways that regulate gene expression, cell-cycle progression and tissue growth. An Epigen Antibody can help researchers examine the abundance and distribution of this epithelial mitogen when studying EGFR signaling dynamics and ligand-specific cellular responses.

EPGN expression is regulated according to tissue type, developmental stage and physiological context. Experimental studies have connected Epigen signaling with epithelial development, tissue remodeling, wound responses and the maintenance of selected progenitor cell populations. Because EGFR signaling has major roles in epithelial homeostasis, changes in ligand production can influence how cells communicate with neighboring epithelial, stromal and immune populations. Epigen may act locally after release from the cell surface or signal through direct interactions involving its membrane-associated precursor. The relative expression of Epigen and other EGFR ligands, including EGF, transforming growth factor alpha, amphiregulin, epiregulin, betacellulin and heparin-binding EGF-like growth factor, can shape the intensity and duration of receptor activation.

Altered EPGN expression has also been investigated in cancer and other conditions involving abnormal epithelial proliferation. Increased ligand availability may contribute to persistent EGFR pathway activity in susceptible cells, while the biological outcome depends on receptor abundance, ligand processing and the surrounding signaling environment. Researchers can compare Epigen expression with EGFR activation or downstream MAPK and AKT pathway markers to evaluate potential relationships between ligand production and cellular behavior. Epigen Antibody products may be used in western blot, immunohistochemistry, immunofluorescence or other validated applications to examine EPGN protein expression in cell and tissue models. NSJ Bioreagents supplies Epigen Antibody options for research into epithelial growth, EGFR ligand biology, tissue development and cancer-associated signaling.

Explore our Signal Transduction Antibodies page for additional reagents targeting EGFR ligands, receptor tyrosine kinases and downstream growth-regulatory pathways.

Application Notes

Optimal dilution of the Epigen Antibody / Epithelial Mitogen Antibody should be determined by the researcher.

Immunogen

A recombinant human protein corresponding to amino acids A23-K110 was used as the immunogen for the Epigen antibody.

Storage

After reconstitution, the Epigen antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

EPGN Antibody, Epithelial Mitogen Antibody, EPG Antibody, Proepigen Antibody, Epigen Precursor Antibody, EGF Family Ligand Epigen Antibody, Epithelial Mitogen Homolog Antibody

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