

# Epigen (H-60): sc-99207

## BACKGROUND

Epigen is an epithelial mitogen that belongs to the EGF ligand family for ErbB receptors. Comprising 152 amino acids, the Epigen protein contains 2 hydrophobic regions corresponding to a putative signal sequence and trans-membrane domain, which flank a core of amino acids encompassing 6 cysteine residues and 2 putative N-linked glycosylation sites. In epithelial cells, Epigen stimulates the phosphorylation of ErbB-1 and mitogen-activated protein kinases and also activates a reporter gene containing enhancer sequences present in the c-Fos promoter. Epigen also stimulates the proliferation of HaCa T cells. With its ability to promote the growth of epithelial cells, Epigen may constitute a novel molecular target for wound-healing therapy.

## REFERENCES

1. Strachan, L., et al. 2001. Cloning and biological activity of Epigen, a novel member of the EP growth-factor superfamily. *J. Biol. Chem.* 276: 18265-18271.
2. Lee, D., et al. 2004. Epiregulin is not essential for development of intestinal tumors but is required for protection from intestinal damage. *Mol. Cell. Biol.* 24: 8907-1896.
3. Kochupurakkal, B.S., et al. 2005. Epigen, the last ligand of ErbB receptors, reveals intricate relationships between affinity and mitogenicity. *J. Biol. Chem.* 280: 8503-8512.
4. Katoh, Y. and Katoh, M. 2006. Canonical WNT-signaling pathway and human AREG. *Int. J. Mol. Med.* 17: 1163-1166.
5. Amsellem-Ouazana, D., et al. 2006. Gene expression profiling of ErbB receptors and ligands in human cell carcinoma of the bladder. *J. Urol.* 175: 1127-1132.

## CHROMOSOMAL LOCATION

Genetic locus: EPGN (human) mapping to 4q13.3; Epgn (mouse) mapping to 5 E1.

## SOURCE

Epigen (H-60) is a rabbit polyclonal antibody raised against amino acids 51-110 mapping within an internal region of Epigen of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Epigen (H-60) is recommended for detection of Epigen of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Epigen (H-60) is also recommended for detection of Epigen in additional species, including equine and canine.

Suitable for use as control antibody for Epigen siRNA (h): sc-60591, Epigen siRNA (m): sc-60592, Epigen shRNA Plasmid (h): sc-60591-SH, Epigen shRNA Plasmid (m): sc-60592-SH, Epigen shRNA (h) Lentiviral Particles: sc-60591-V and Epigen shRNA (m) Lentiviral Particles: sc-60592-V.

Molecular Weight of Epigen: 15 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Taniguchi, K., et al. 2011. Epigen is induced during the interleukin-13-stimulated cell proliferation in murine primary airway epithelial cells. *Exp. Lung Res.* 37: 461-470.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.