



## EMP-1 (T-18): sc-55717

### BACKGROUND

Epithelial membrane protein-1 (EMP-1) is a four pass transmembrane protein consisting of 160 amino acids. It is a member of a small family of epithelial membrane proteins. EMP-1 is very similar in structure to its close relative, peripheral myelin protein 22 (PMP22). It is most predominantly expressed in tissues of the gastrointestinal tract but has also been found to be a junctional protein in the liver expressed along the intercellular border. EMP-1 directly interacts with the C-terminus of the P2X7 receptor and may be involved in membrane blebbing. EMP-1 may also be an important regulator in cell communication, signaling and adhesion. When EMP-1 is overexpressed, cell proliferation is inhibited, S phase is arrested and G<sub>1</sub> phase is prolonged in esophageal cancer cells. EMP-1 may play a role in tumorigenesis and has been identified as a biomarker for gefitinib treatment resistance for patients with lung cancer.

### REFERENCES

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2. Chen, Y., et al. 1997. cDNA cloning, genomic structure, and chromosome mapping of the human epithelial membrane protein CL-20 gene (EMP1), a member of the PMP22 family. *Genomics* 41: 40-48.
3. Jetten, A.M., et al. 2000. The peripheral myelin protein 22 and epithelial membrane protein family. *Prog. Nucleic Acid Res. Mol. Biol.* 64: 97-129.
4. Wang, H.T., et al. 2002. Effect of EMP-1 gene on human esophageal cancer cell line. *Ai Zheng* 21: 229-232.
5. Wilson, H.L., et al. 2002. Epithelial membrane proteins induce membrane blebbing and interact with the P2X7 receptor C-terminus. *J. Biol. Chem.* 277: 34017-34023.
6. Liu, Y.H., et al. 2003. Differential expression of the epithelial membrane protein-1 of laryngeal carcinoma. *Zhongguo Yi Xue Ke Xue Yuan Xue Bao* 25: 47-51.
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8. Lee, H.S., et al. 2005. EMP-1 is a junctional protein in a liver stem cell line and in the liver. *Biochem. Biophys. Res. Commun.* 334: 996-1003.
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### CHROMOSOMAL LOCATION

Genetic locus: EMP1 (human) mapping to 12p12.3; Emp1 (mouse) mapping to 6 G1.

### SOURCE

EMP-1 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EMP-1 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.

Blocking peptide available for competition studies, sc-55717 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

EMP-1 (T-18) is recommended for detection of EMP-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for EMP-1 siRNA (h): sc-62274.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

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