

Emp (I-12): sc-167747

BACKGROUND

Emp (erythroblast macrophage protein), also known as macrophage erythroblast attachor or human lung cancer oncogene 10 protein, is a 396 amino acid ubiquitously expressed adhesion protein. Expressed as five alternatively spliced isoforms, Emp contains one CTLH domain and one LisH domain. Emp can form a complex with F-actin, which is involved regulating actin distribution in erythroblasts and macrophages. Considered to assist with cell division and nuclear architecture, Emp is localized with condensed chromatin at prophase, nuclear spindle poles at metaphase and in the contractile ring during telophase and cytokinesis. Although the exact function of Emp is unknown, Emp is suggested to be involvement in erythroblast-macrophage cell attachment, terminal maturation and enucleation of erythroid cells, and inhibiting apoptosis of erythroblasts.

REFERENCES

- Hanspal, M., et al. 1998. Molecular identification and functional characterization of a novel protein that mediates the attachment of erythroblasts to macrophages. *Blood* 92: 2940-2950.
- Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36: 40-45.
- Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). *Genome Res.* 14: 2121-2127.
- Bala, S., et al. 2006. Emp is a component of the nuclear matrix of mammalian cells and undergoes dynamic rearrangements during cell division. *Biochem. Biophys. Res. Commun.* 342: 1040-1048.
- Soni, S., et al. 2006. Absence of erythroblast macrophage protein (Emp) leads to failure of erythroblast nuclear extrusion. *J. Biol. Chem.* 281: 20181-20189.

CHROMOSOMAL LOCATION

Genetic locus: MAEA (human) mapping to 4p16.3; Maea (mouse) mapping to 5 B1.

SOURCE

Emp (I-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Emp 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-167747 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Emp (I-12) is recommended for detection of Emp of mouse, rat and 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).

Emp (I-12) is also recommended for detection of Emp in additional species, including canine.

Suitable for use as control antibody for Emp siRNA (h): sc-89290, Emp siRNA (m): sc-144646, Emp shRNA Plasmid (h): sc-89290-SH, Emp shRNA Plasmid (m): sc-144646-SH, Emp shRNA (h) Lentiviral Particles: sc-89290-V and Emp shRNA (m) Lentiviral Particles: sc-144646-V.

Molecular Weight of Emp isoforms 1/2/3: 45/41/40 kDa.

Molecular Weight of Emp isoforms 4/5: 36/27 kDa.

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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.