



## PEMT (F-20): sc-27260

### BACKGROUND

Phosphatidylethanolamine-N-methyltransferase (PEMT) catalyzes the conversion of phosphatidylethanolamine to phosphatidylcholine (PC) through three sequential methylation reactions. This pathway is primarily utilized in liver, whereas other cells utilize the 1,2-diacylglycerol cholinephosphotransferase (CDP-choline) pathway. PEMT activity participates in many physiologic processes, including the flux of lipid between liver and plasma and the delivery of essential fatty acids to blood and peripheral tissues via liver-derived lipoproteins. PEMT2, an isoform of the enzyme, regulates hepatocyte cell division by inhibiting proliferation. Loss of PEMT2 may contribute to the onset of liver carcinogenesis.

### REFERENCES

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- Walkey, C.J., Donohue, L.R., Bronson, R., Agellon, L.B. and Vance, D.E. 1997. Disruption of the murine gene encoding phosphatidylethanolamine N-methyltransferase. *Proc. Natl. Acad. Sci. USA* 94: 12880-12885.
- Vance, D.E., Walkey, C.J. and Cui, Z. 1997. Phosphatidylethanolamine N-methyltransferase from liver. *Biochim. Biophys. Acta* 1348: 142-150.
- Walkey, C.J., Shields, D.J. and Vance, D.E. 1999. Identification of three novel cDNAs for human phosphatidylethanolamine N-methyltransferase and localization of the human gene on chromosome 17p11.2. *Biochim. Biophys. Acta* 1436: 405-412.
- Watkins, S.M., Zhu, X. and Zeisel, S.H. 2003. Phosphatidylethanolamine-N-methyltransferase activity and dietary choline regulate liver-plasma lipid flux and essential fatty acid metabolism in mice. *J. Nutr.* 133: 3386-3891.

### CHROMOSOMAL LOCATION

Genetic locus: PEMT (human) mapping to 17p11.2; Pemt (mouse) mapping to 11 B1.3.

### SOURCE

PEMT (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PEMT 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-27260 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.

### RESEARCH USE

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

### APPLICATIONS

PEMT (F-20) is recommended for detection of PEMT 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).

PEMT (F-20) is also recommended for detection of PEMT in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PEMT siRNA (h): sc-106913, PEMT siRNA (m): sc-152162, PEMT shRNA Plasmid (h): sc-106913-SH, PEMT shRNA Plasmid (m): sc-152162-SH, PEMT shRNA (h) Lentiviral Particles: sc-106913-V and PEMT shRNA (m) Lentiviral Particles: sc-152162-V.

Molecular Weight of PEMT2: 22.5 kDa.

Positive Controls: T-47D cell lysate: sc-2293.

### 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.

### PROTOCOLS

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