

LPO (M-60): sc-134849

BACKGROUND

Lactoperoxidase is an antibacterial agent in cow milk. The heme protein lactoperoxidase (LPO), also referred to as salivary peroxidase (SPO), is an oxidoreductase secreted into milk. LPO, a 712 amino acid protein, belongs to the XPO subfamily of the peroxidase family. It is expressed in mammary and salivary glands and, in the presence of H₂O₂, LPO acts as a catalyst for the oxidation of many phenols and aromatic amines. It is crucial for protecting the lactating mammary gland and intestinal tract of newborn infants against microorganisms. LPO binds one calcium ion per heterodimer and one heme B (iron-protoporphyrin IX) group covalently per heterodimer. The LPO gene, which spans 28 kb, is similar in gene organization and sequence to the peroxidase genes MPO and EPX, suggesting the possibility that these genes evolved from a common ancestral gene. The LPO and MPO genes are arranged in a tail-to-tail manner on chromosome 17q23.1.

REFERENCES

1. Dull, T.J., et al. 1990. Molecular cloning of cDNAs encoding bovine and human lactoperoxidase. *DNA Cell Biol.* 9: 499-509.
2. Kiser, C., et al. 1996. Cloning and sequence analysis of the human salivary peroxidase-encoding cDNA. *Gene* 173: 261-264.
3. Ueda, T., et al. 1997. Molecular cloning and characterization of the chromosomal gene for human lactoperoxidase. *Eur. J. Biochem.* 243: 32-41.

CHROMOSOMAL LOCATION

Genetic locus: LPO (human) mapping to 17q23.1; Lpo (mouse) mapping to 11 C.

SOURCE

LPO (M-60) is a rabbit polyclonal antibody raised against amino acids 304-363 mapping within an internal region of LPO of mouse origin.

PRODUCT

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

APPLICATIONS

LPO (M-60) is recommended for detection of LPO of mouse, rat and, to a lesser extent, 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).

Suitable for use as control antibody for LPO siRNA (h): sc-60962, LPO siRNA (m): sc-60963, LPO shRNA Plasmid (h): sc-60962-SH, LPO shRNA Plasmid (m): sc-60963-SH, LPO shRNA (h) Lentiviral Particles: sc-60962-V and LPO shRNA (m) Lentiviral Particles: sc-60963-V.

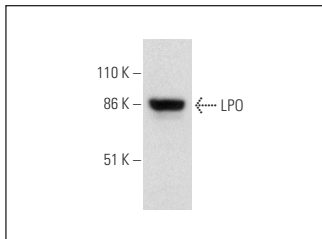
Molecular Weight of LPO: 78 kDa.

Positive Controls: CSMLO whole cell lysate: sc-364369.

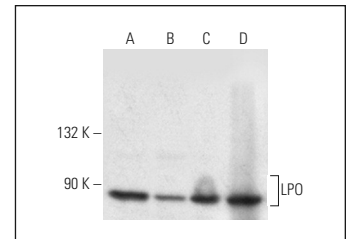
RECOMMENDED SECONDARY REAGENTS

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.

DATA



LPO (M-60): sc-134849. Western blot analysis of LPO expression in CSMLO whole cell lysate.



LPO (M-60): sc-134849. Western blot analysis of LPO expression in MDA-MB-231 (A), Caki-1 (B) and THP-1 (C) whole cell lysates and human lung tissue extract (D).

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 or our catalog for detailed protocols and support products.