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## Product Information

### Anti-Prox1

produced in rabbit, affinity isolated antibody

Catalog Number **P7124**

### Product Description

Anti-Prox1 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 723-737 of human Prox1 with N-terminal lysine added, conjugated to KLH. The corresponding sequence is identical in mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Prox1 recognizes human Prox1. Applications include immunoblotting, ~83 kDa and immunofluorescence. Detection of the Prox1 band by immunoblotting is specifically inhibited by the immunizing peptide.

Prox1, the mammalian homologue of the *Drosophila* homeobox gene prospero, is a highly conserved transcription factor that plays a major role during embryonic lymphangiogenesis.<sup>1</sup> Prox1 is expressed in a subpopulation of endothelial cells that, after budding from veins, gives rise to the mammalian lymphatic system. In Prox1 knockout mice, lymphatic vasculature does not develop, whereas the vasculogenesis and angiogenesis of the vascular system appear to be normal.<sup>2,3</sup> Functional inactivation of a single allele of the gene Prox1 leads to adult-onset obesity due to lymphatic vascular defects.<sup>4</sup> Prox-1 is a useful marker for differentiating lymphatic endothelial cells from the other blood vessel endothelial cells.<sup>5</sup> However, Prox1 is also expressed in several nonendothelial cell types. It is most actively expressed in the developing lens but detected also in embryonic brain, lung, liver, and kidney. In adult, it is more abundant in heart and liver than in brain, skeletal muscle, kidney and pancreas. Prox1 plays an important role in the early development of CNS, lens, retina, liver, and pancreas. Hepatocytes and photoreceptors are dependent on Prox1 for proper differentiation.<sup>6-10</sup>

### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.0 mg/mL

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

### Product Profile

Immunoblotting: a working concentration of 0.5-1 µg/mL is recommended using a whole extract of human SHSY5Y cells, applying a chemiluminescent detection reagent.

Indirect immunofluorescence: a working concentration of 2-4 µg/mL is recommended using human HepG2 cells.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

### References

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ST,KAA,PHC 10/06-1

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