

## Product datasheet for **TA302031**

### PROX1 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:1000, IHC: 1:10~50
Reactivity:	Human (Predicted: Mouse)
Host:	Rabbit
Isotype:	Ig
Clonality:	Polyclonal
Immunogen:	This PROX1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 185-214 amino acids from the Central region of human PROX1.
Formulation:	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.
Purification:	This antibody is purified through a protein A column, followed by peptide affinity purification.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	83162 Da
Gene Name:	prospero homeobox 1
Database Link:	<a href="#">NP_002754</a> <a href="#">Entrez Gene 19130 Mouse</a> <a href="#">Entrez Gene 5629 Human</a> <a href="#">Q92786</a>



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**Background:**

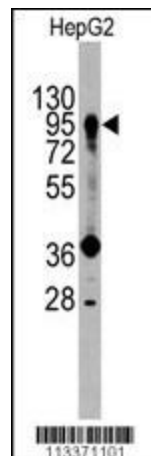
The expression pattern of Prox1 suggests that it has a role in a variety of embryonic tissues, including lens. Prox mRNA is present in many different human tissues with lens demonstrating the highest level. Homozygous Prox1-null mice die at midgestation from multiple developmental defects, and a targeted effect on lens development has been reported. Prox1 inactivation caused abnormal cellular proliferation, downregulated expression of the cell cycle inhibitors Cdkn1b and Cdkn1c, misexpression of E-cadherin, and excessive apoptosis. Consequently, mutant lens cells failed to polarize and elongate properly, resulting in a hollow lens. Prox1 is expressed in a subpopulation of endothelial cells that by budding and sprouting give rise to the lymphatic system. Prox1 appears to be a specific and required regulator of the development of the lymphatic system. Prox1 also has been documented to be required for hepatocyte migration in the mouse. Loss of Prox1 results in a smaller liver with a reduced population of clustered hepatocytes. The homeodomain protein Prox1 regulates the egress of progenitor cells from the cell cycle in the embryonic mouse retina. Cells lacking Prox1 are less likely to stop dividing, and ectopic expression of Prox1 forces progenitor cells to exit the cell cycle. Prox1 acts as a key participant in progenitor-cell proliferation and cell-fate determination in the vertebrate retina.

**Synonyms:**

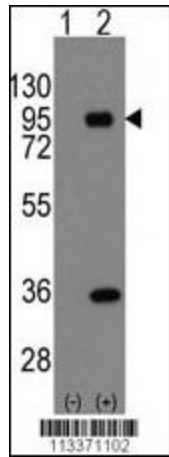
prospero-related homeobox 1; prospero homeobox 1

**Protein Families:**

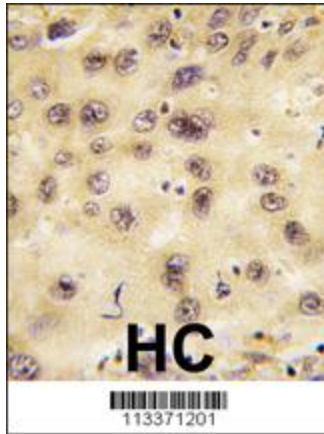
Embryonic stem cells, ES Cell Differentiation/IPS

**Product images:**

Western blot analysis of anti-PROX1 Antibody (Center) (Cat.#TA302031) in HepG2 cell line lysates (35ug/lane). PROX1 (arrow) was detected using the purified Pab.



Western blot analysis of PROX1 (arrow) using rabbit polyclonal PROX1 Antibody (Center) (Cat.#TA302031). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PROX1 gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with PROX1 antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.