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PRRX1 Antibody

Catalog # ASC11893

Product Information

Application	WB, E
Primary Accession	P54821
Other Accession	NP_073207, 12707577
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	27296
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PRRX1 antibody can be used for detection of PRRX1 by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	5396
Other Names	Paired mesoderm homeobox protein 1, Homeobox protein PHOX1, Paired-related homeobox protein 1, PRX-1, PRRX1, PMX1
Target/Specificity	PRRX1; PRRX1 antibody is human, mouse and rat reactive. At least two isoforms of PRRX1 are known to exist; this antibody will detect both isoforms.
Reconstitution & Storage	PRRX1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	PRRX1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRRX1
Synonyms	PMX1
Function	Master transcription factor of stromal fibroblasts for myofibroblastic lineage progression. Orchestrates the functional drift of fibroblasts into myofibroblastic phenotype via TGF-beta signaling by remodeling a super-enhancer landscape. Through this function, plays an essential role in wound healing process (PubMed:35589735). Acts as a transcriptional regulator of muscle creatine kinase (MCK) and so has a role in the establishment of diverse mesodermal muscle types. The protein binds to an A/T-rich element in the muscle creatine enhancer (By similarity). May play a role in homeostasis and regeneration of bone, white adipose tissue and derm

(By similarity).

Cellular Location Nucleus {ECO:0000250|UniProtKB:P63013}.

Tissue Location [Isoform 1]: Widely expressed in embryonic and adult tissues, with highest levels in skeletal muscle. Isoform 1 is either expressed at similar or higher levels compared to isoform 2 in all embryonic tissues but skeletal muscle and heart. In adult tissues, expressed at lower levels compared to isoform 2

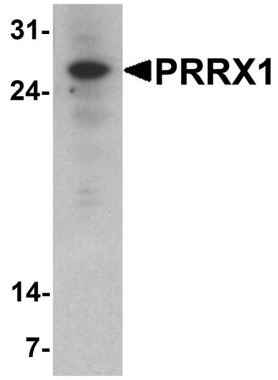
Background

The paired related homeobox protein 1 (PRRX1) is a paired-type DNA-binding homeodomain that plays an important role as a key switch for neural cell lineage determination and is essential for development (1,2). PRRX1 is expressed in a number of undifferentiated mesenchymal cells in mouse embryos and adults (3). Mice with a disrupted PRRX1 gene show perinatal death with craniofacial and limb malformations (4). Low PRRX1 expression levels were significantly associated with metastasis and poor prognosis of breast and colorectal cancer (5).

References

Nohno T, Koyama E, Myokai F, et al. Chicken homeobox gene related to Drosophila paired is predominantly expressed in the developing limb. Dev. Biol. 1993; 158:254–64.
Shimozaki K, Clemenson GD Jr, and Gage FH. Paired related homeobox protein 1 is a regulator of stemness in adult neural stem/progenitor cells. J. Neurosci. 2013; 33:4066-75.
Cserjesi P, Lilly B, Bryson L, et al. MHox: a mesodermally restricted homeodomain protein that binds an essential site in the muscle creatine kinase enhancer. Development 1992; 115:1087–101.
Lu MF, Cheng HT, Kern MJ, et al. prx-1 functions cooperatively with another paired-related homeobox gene, prx-2, to maintain cell fates within the craniofacial mesenchyme. Development 1999; 126:495–504.

Images



Western blot analysis of PRRX1 in HeLa cell lysate with PRRX1 antibody at 1 µg/ml.

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