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Mouse Nr5a2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21181c

Product Information

Application	WB, E
Primary Accession	P45448
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB51100
Calculated MW	64020

Additional Information

Gene ID	26424
Other Names	Nuclear receptor subfamily 5 group A member 2, Liver receptor homolog 1, LRH-1, Nr5a2, Lrh1
Target/Specificity	This Mouse Nr5a2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 200-233 amino acids from the Central region of Mouse Nr5a2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Nr5a2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Nr5a2 {ECO:0000303|PubMed:21614002, ECO:0000312|MGI:MGI:1346834}
Function	Orphan nuclear receptor that binds DNA as a monomer to the 5'-TCAAGGCCA-3' sequence and controls expression of target genes: regulates key biological processes, such as early embryonic development, cholesterol and bile acid synthesis pathways, as well as liver and pancreas

morphogenesis (PubMed:14766742, PubMed:15831456, PubMed:15976031, PubMed:29443959, PubMed:38409506, PubMed:38977846, PubMed:39361745). Ligand-binding causes conformational change which causes recruitment of coactivators, promoting target gene activation (PubMed:15976031). The specific ligand is unknown, but specific phospholipids, such as phosphatidylethanolamine, phosphatidylserine, dilauroyl phosphatidylcholine and diundecanoyl phosphatidylcholine can act as ligand in vitro (PubMed:15976031). Acts as a pioneer transcription factor, which unwraps target DNA from histones and elicits local opening of closed chromatin (PubMed:38409506). Plays a central role during preimplantation stages of embryonic development (PubMed:15014077, PubMed:15831456, PubMed:34397088, PubMed:36423263, PubMed:37935903, PubMed:38243114, PubMed:38386558, PubMed:39361745). Plays a minor role in zygotic genome activation (ZGA) by regulating a small set of two-cell stage genes (PubMed:36423263, PubMed:39361745). Plays a major role in morula development (2-16 cells embryos) by acting as a master regulator at the 8-cell stage, controlling expression of lineage-specifying transcription factors and genes involved in mitosis, telomere maintenance and DNA repair (PubMed:37935903, PubMed:38386558, PubMed:39361745). Zygotic NR5A2 binds to both closed and open chromatin with other transcription factors, often at SINE B1/Alu repeats DNA elements, promoting chromatin accessibility at nearby regulatory regions (PubMed:39361745). Also involved in the epiblast stage of development and embryonic stem cell pluripotency, by promoting expression of POU5F1/OCT4 (PubMed:15831456, PubMed:20096661, PubMed:27984042, PubMed:34397088, PubMed:38386558). Regulates other processes later in development, such as formation of connective tissue in lower jaw and middle ear, neural stem cell differentiation, ovarian follicle development and Sertoli cell differentiation (PubMed:27447294, PubMed:33441767, PubMed:35192609, PubMed:36905926). Involved in exocrine pancreas development and acinar cell differentiation (PubMed:21852532, PubMed:25063451, PubMed:29443959). Acts as an essential transcriptional regulator of lipid metabolism (By similarity). Key regulator of cholesterol 7-alpha-hydroxylase gene (CYP7A) expression in liver (By similarity). Activates the transcription of CYP2C38 (PubMed:30555544). Also acts as a negative regulator of inflammation in different organs, such as intestine, liver and pancreas (PubMed:17670946, PubMed:29443959, PubMed:30305617). Protects against intestinal inflammation via its ability to regulate glucocorticoid production (PubMed:16923850, PubMed:17670946). Plays an anti-inflammatory role during the hepatic acute phase response by acting as a corepressor: inhibits the hepatic acute phase response by preventing dissociation of the N-Cor corepressor complex (By similarity). Acts as a regulator of immunity by promoting lymphocyte T- cell development, proliferation and effector functions (PubMed:31328159). Also involved in resolution of endoplasmic reticulum stress in the liver (PubMed:24737860).

Cellular Location Nucleus. Chromosome

Background

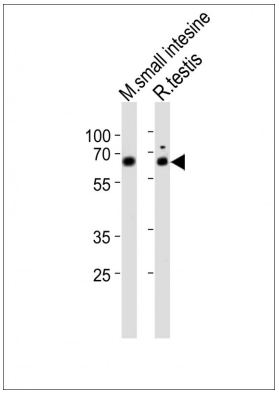
Binds to promoters containing the sequence element 5'- AACGACCGACCTTGAG-3'. Plays a role in the regulation of gene expression in liver and pancreas. May play a role in embryonic development (By similarity).

References

Tugwood J.D.,et al.Submitted (FEB-1992) to the EMBL/GenBank/DDBJ databases.
Sablin E.P.,et al.Mol. Cell 11:1575-1585(2003).

Li Y.,et al.Proc. Natl. Acad. Sci. U.S.A. 102:9505-9510(2005).

Images



All lanes : Anti-Nr5a2 Antibody (Center) at 1:1000 dilution Lane 1: mouse small intestine lysates Lane 2: rat testis lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 64 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Liver Receptor Homolog-1 Regulates Organic Anion Transporter 2 and Docetaxel Pharmacokinetics.
- REV-ERBa Regulates CYP7A1 through Repression of Liver Receptor Homolog-1.

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