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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
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

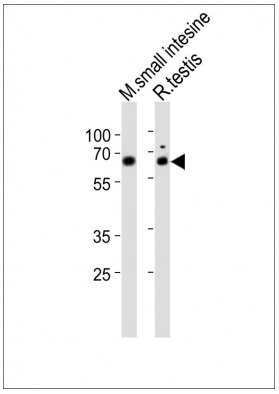
Background

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.