abcam

ab315800

Anti-CYP51A1/CYP51 antibody [EPR27379-150]

Recombinant | RabMAb | Advanced Validation | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27379-150
Purification technique	Affinity purification Protein A
Concentration	0.529 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

mIHC

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse

Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Species	Rat
Dilution info	1/50
Notes	-

Target data

See full target information CYP51A1

Function Sterol 14alpha-demethylase that plays a critical role in the cholesterol biosynthesis pathway, being cholesterol the major sterol component in mammalian membranes as well as a precursor for bile acid and steroid hormone synthesis (PubMed:20149798, PubMed:8619637, PubMed:9559662). Cytochrome P450 monooxygenase that catalyzes the three-step oxidative removal of the 14alpha-methyl group (C-32) of sterols such as lanosterol (lanosta-8,24-dien-3beta-ol) and 24,25-dihydrolanosterol (DHL) in the form of formate, and converts the sterols to 4,4-dimethyl-5alpha-cholesta-8,14,24-trien-3beta-ol and 4,4-dimethyl-8,14-cholestadien-3beta-ol, respectively, which are intermediates of cholesterol biosynthesis (PubMed:20149798, PubMed:8619637, PubMed:9559662). Can also demethylate substrates not intrinsic to mammals, such as eburicol (24-methylene-24,25-dihydrolanosterol), but at a lower rate than DHL (PubMed:9559662).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CYP51A1 also known as CYP51 is a cytochrome P450 enzyme. It plays an important mechanical role in cholesterol biosynthesis specifically catalyzing the demethylation of lanosterol. This enzyme has a molecular mass of approximately 55 kDa. CYP51A1 is expressed in multiple tissues including the liver testes and adrenal glands reflecting its widespread functional importance within the body.
Biological function summary	CYP51A1 is essential in the production of sterols such as cholesterol which are fundamental components of cell membranes. It does not operate alone; rather it forms part of an enzymatic complex involved in lipid homeostasis. By participating in this complex CYP51A1 influences cell membrane integrity fluidity and signaling.
Pathways	The activity of CYP51A1 integrates into the cholesterol biosynthesis pathway where it serves a critical role in the downstream conversion of lanosterol to cholesterol. Its action influences the pathway alongside other key enzymes like HMG-CoA reductase. Additionally the enzyme participates in broader lipid metabolic pathways linking with proteins such as squalene synthase that also contribute to sterol production.
Associated diseases and disorders	CYP51A1's activity associates with certain lipid metabolism disorders including congenital adrenal hyperplasia and Smith-Lemli-Opitz syndrome. These conditions often involve disrupted cholesterol synthesis where CYP51A1’s malfunction can play a part. Moreover CYP51A1 connects to liver function through its interaction

with proteins such as sterol regulatory element binding proteins (SREBPs) which regulate cholesterol homeostasis and can be associated with liver diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

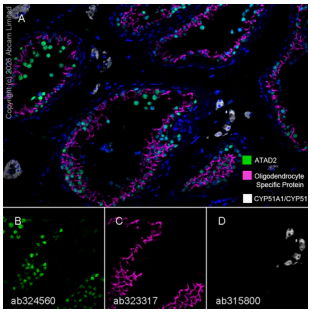
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

25 product images



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of Human testis using rabbit Anti-CYP51A1/CYP51 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human testis tissue staining ATAD2 with ab324560 at a 1/100 dilution, ab323317 anti-Oligodendrocyte Specific Protein used at 1/500 dilution and ab315800 anti-CYP51A1/CYP51 used at a 1/2000 dilution. Panel A: anti-ATAD2 (green; Opal™570), anti-Oligodendrocyte Specific Protein (magenta; Opal™690) and anti-CYP51A1/CYP51 (gray; Opal™520) on human testis.

Panel B: anti-ATAD2 staining nucleus of proliferating cells in human testis.

Panel C: anti-Oligodendrocyte Specific Protein staining apical Sertoli cell crypts in human testis.

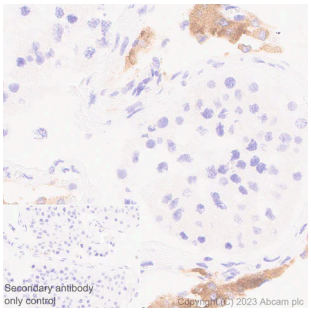
Panel D: anti-CYP51A1/CYP51 staining Leydig cells in human testis.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab324560, ab323317 and ab315800 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

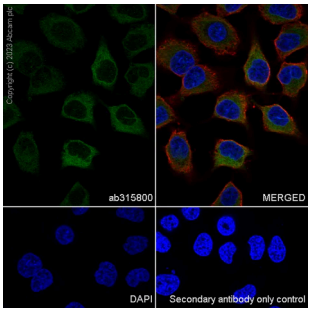
Immunohistochemical analysis of paraffin-embedded Human testis tissue labeling CYP51A1/CYP51 with ab315800 at 1/2000 (0.26 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on leydig cells of human testis. The section was incubated with ab315800 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



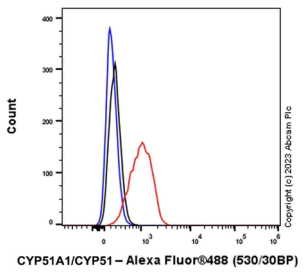
Immunocytochemistry/ Immunofluorescence - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Huh7 (human hepatocellular carcinoma epithelial cell) cells labelling CYP51A1/CYP51 with ab315800 at 1/50 (10.38 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/mL) dilution (Green).

Confocal image showing cytoplasmic staining in Huh7 cell line.
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

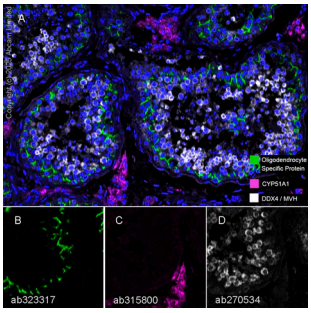
Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/mL) dilution.



Flow Cytometry (Intracellular) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HEK-293 (human embryonic kidney epithelial cell) cells labelling CYP51A1/CYP51 with ab315800 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of Human testis using rabbit Anti-CYP51A1/CYP51 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human testis tissue staining Oligodendrocyte Specific Protein with ab323317 at a 1/500 dilution, ab315800 anti-CYP51A1 used at 1/2000 dilution and ab270534 anti-DDX4/MVH used at a 1/2000 dilution.
Panel A: anti-Oligodendrocyte Specific Protein (green; Opal™520), anti-CYP51A1 (magenta; Opal™690) and anti-DDX/MVH (gray; Opal™570) on human testis.

Panel B: anti-Oligodendrocyte Specific Protein staining apical Sertoli cell crypts in human testis.

Panel C: anti-CYP51A1 staining Leydig cells in human testis.

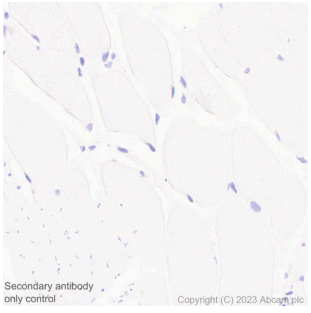
Panel D: anti-DDX4/MVH staining spermatogonia in human testis.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab323317, ab315800 and ab270534 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human skeletal muscle using rabbit Anti-CYP51A1/CYP51 antibody

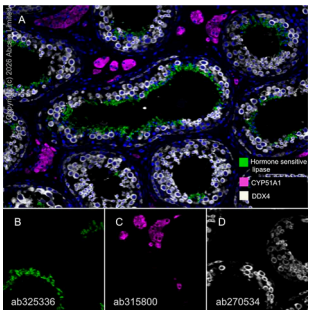
Immunohistochemical analysis of paraffin-embedded Human skeletal muscle tissue labeling CYP51A1/CYP51 with ab315800 at 1/2000 (0.26 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: no staining on human skeletal muscle. The section was incubated with ab315800 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of Human testis using rabbit Anti-CYP51A1/CYP51 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human testis tissue staining Hormone sensitive lipase with ab325336 at a 1/2000 (0.248 µg/ml) dilution, ab315800 anti-CYP51A1 used at a 1/2000 (0.26 µg/ml) dilution, and ab270534 anti-DDX4 used at a 1/2000 (0.238 µg/ml) dilution.
Panel A: anti-Hormone sensitive lipase (green; Opal™520), anti-CYP51A1 (magenta; Opal™690), anti-DDX4 (gray; Opal™570) on human testis.

Panel B: anti-Hormone sensitive lipase staining spermatid in human testis.

Panel C: anti-CYP51A1 staining leydig cells in human testis.

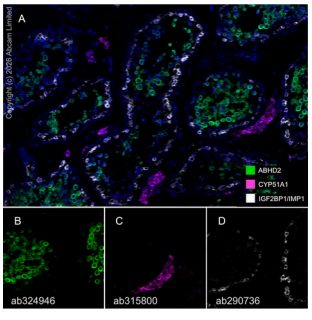
Panel D: anti-DDX4 staining spermatogonia in human testis.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab325336, ab315800 and ab270534 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of Human testis using rabbit Anti-CYP51A1/CYP51 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human testis tissue staining ABHD2 with ab324946 at a 1/2000 dilution, ab315800 anti-CYP51A1 used at 1/2000 dilution (0.26 µg/ml) and ab290736 anti-IGF2BP1/IMP1 used at 1/2000 dilution (0.284 µg/ml).
Panel A: anti-ABHD2 (green; Opal™520), anti-CYP51A1 (magenta; Opal™690), anti-IGF2BP1/IMP1 (gray; Opal™570) on human testis.

Panel B: anti-ABHD2 staining spermatocytes in human testis.

Panel C: anti-CYP51A1 staining leydig cells in human testis.

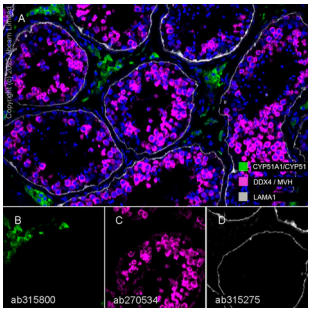
Panel D: anti-IGF2BP1/IMP1 staining spermatogonia in mouse colon.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab324946, ab315800 and ab290736 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of human testis using rabbit Anti-CYP51A1/CYP51 antibody

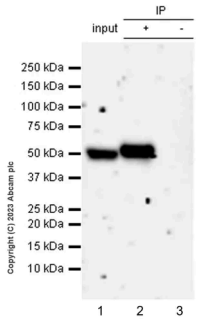
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded human testis tissue staining CYP51A1/CYP51 with ab315800 at a 1/2000 dilution, ab270534 anti-DDX4 / MVH used at 1/2000 dilution and ab315275 anti-LAMA1 used at a 1/500 dilution. Opal Polymer HRP Ms + Rb was used as a secondary antibody.

Panel A: merged staining of anti-CYP51A1/CYP51 (green; Opal™520), anti-DDX4 / MVH (magenta; Opal™690) and anti-LAMA1 (grey; Opal™570) on human testis. Panel B: anti-CYP51A1/CYP51 staining leydig cells in human testis.
Panel C: anti-DDX4 / MVH staining spermatogonia and spermatocytes in human testis.
Panel D: anti-LAMA1 staining basement membrane in human testis.
Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab315800, ab270834 and ab315275 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND®RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunoprecipitation - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 was immunoprecipitated from 0.35 mg Huh7 (human hepatocellular carcinoma epithelial cell) whole cell lysate with ab315800 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab315800 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800) at 1/1000 dilution

Lane 1:
Huh7 (human hepatocellular carcinoma epithelial cell) whole cell lysate

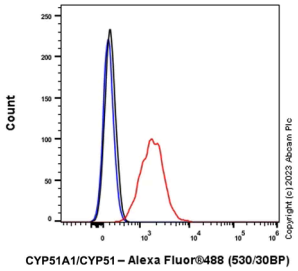
Lane 2:
ab315800 at 1/30 IP in Huh7 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 1/30 dilution

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab315800 in Huh7 whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

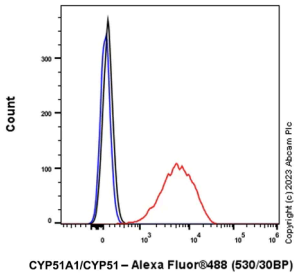
Exposure time: 180s



Flow Cytometry (Intracellular) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized C6 (rat glial tumor glial cell) cells labelling CYP51A1/CYP51 with ab315800 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

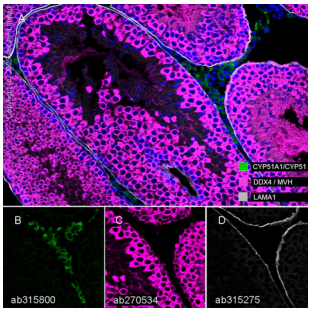
Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling CYP51A1/CYP51 with ab315800 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of rat testis using rabbit Anti-CYP51A1/CYP51 antibody

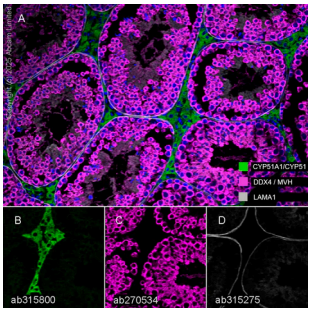
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded rat testis tissue staining CYP51A1/CYP51 with ab315800 at a 1/2000 dilution, ab270534 anti-DDX4 / MVH used at 1/2000 dilution and ab315275 anti-LAMA1 used at a 1/500 dilution. Opal Polymer HRP Ms + Rb was used as a secondary antibody.

Panel A: merged staining of anti-CYP51A1/CYP51 (green; Opal™520), anti-DDX4 / MVH (magenta; Opal™690) and anti-LAMA1 (grey; Opal™570) on rat testis. Panel B: anti-CYP51A1/CYP51 staining leydig cells in rat testis.
Panel C: anti-DDX4 / MVH staining spermatogonia and spermatocytes in rat testis.
Panel D: anti-LAMA1 staining basement membrane in rat testis.
Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab315800, ab270834 and ab315275 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND®RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of mouse testit using rabbit Anti-CYP51A1/CYP51 antibody

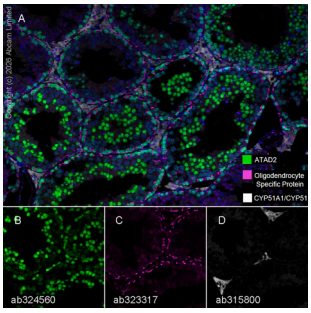
Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse testis tissue staining CYP51A1/CYP51 with ab315800 at a 1/2000 dilution, ab270534 anti-DDX4 / MVH used at 1/2000 dilution and ab315275 anti-LAMA1 used at a 1/500 dilution. Opal Polymer HRP Ms + Rb was used as a secondary antibody.

Panel A: merged staining of anti-CYP51A1/CYP51 (green; Opal™520), anti-DDX4 / MVH (magenta; Opal™690) and anti-LAMA1 (grey; Opal™570) on mouse testis. Panel B: anti-CYP51A1/CYP51 staining leydig cells in mouse testis.
Panel C: anti-DDX4 / MVH staining spermatogonia and spermatocytes in mouse testis.
Panel D: anti-LAMA1 staining basement membrane in mouse testis.
Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab315800, ab270834 and ab315275 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND®RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining using rabbit Anti-CYP51A1/CYP51 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse testis tissue staining ATAD2 with ab324560 at a 1/500 dilution, ab323317 anti-Oligodendrocyte Specific Protein used at 1/500 dilution and ab315800 anti-CYP51A1/CYP51 used at a 1/2000 dilution.
Panel A: anti-ATAD2 (green; Opal™570), anti-Oligodendrocyte Specific Protein (magenta; Opal™690) and anti-CYP51A1/CYP51 (gray; Opal™520) on mouse testis.

Panel B: anti-ATAD2 staining nucleus of proliferating cells in mouse testis.

Panel C: anti-Oligodendrocyte Specific Protein staining apical Sertoli cell crypts in mouse testis.

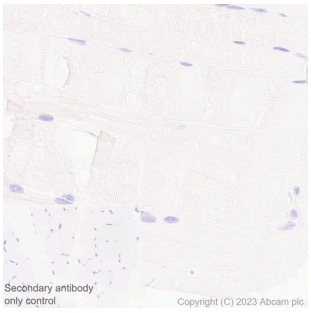
Panel D: anti-CYP51A1/CYP51 staining Leydig cells in mouse testis.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab324560, ab323317 and ab315800 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse skeletal muscle using rabbit Anti-CYP51A1/CYP51 antibody

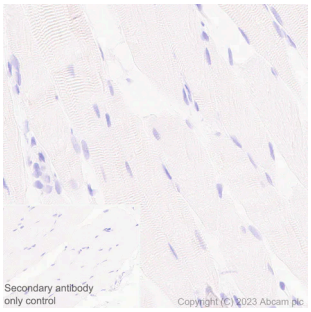
Immunohistochemical analysis of paraffin-embedded Mouse skeletal muscle tissue labeling CYP51A1/CYP51 with ab315800 at 1/2000 (0.26 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: no staining on mouse skeletal muscle. The section was incubated with ab315800 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat skeletal muscle using rabbit Anti-CYP51A1/CYP51 antibody

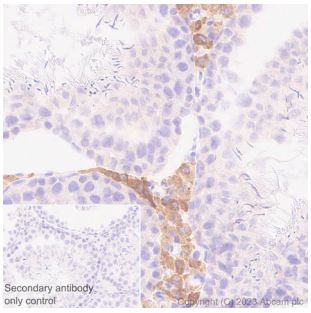
Immunohistochemical analysis of paraffin-embedded Rat skeletal muscle tissue labeling CYP51A1/CYP51 with ab315800 at 1/2000 (0.26 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: no staining on rat skeletal muscle. The section was incubated with ab315800 for 30 mins at room temperature.
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Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

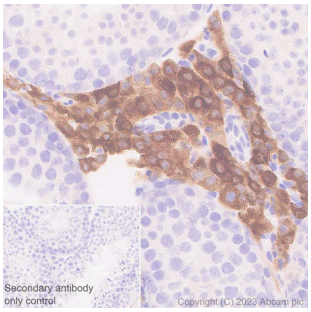
Immunohistochemical analysis of paraffin-embedded Rat testis tissue labeling CYP51A1/CYP51 with ab315800 at 1/2000 (0.26 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on leydig cells of rat testis. The section was incubated with ab315800 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

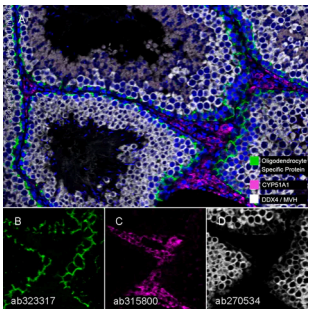
Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labeling CYP51A1/CYP51 with ab315800 at 1/2000 (0.26 ug/ml) dilution, followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on leydig cells of mouse testis. The section was incubated with ab315800 for 30 mins at room temperature.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of Rat testis using rabbit Anti-CYP51A1/CYP51 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded rat testis tissue staining Oligodendrocyte Specific Protein with ab323317 at a 1/500 dilution, ab315800 anti-CYP51A1 used at 1/2000 dilution and ab270534 anti-DDX4/MVH used at a 1/2000 dilution.
Panel A: anti-Oligodendrocyte Specific Protein (green; Opal™520), anti-CYP51A1 (magenta; Opal™690) and anti-DDX/MVH (gray; Opal™570) on rat testis.

Panel B: anti-Oligodendrocyte Specific Protein staining apical Sertoli cell crypts in rat testis.

Panel C: anti-CYP51A1 staining Leydig cells in rat testis.

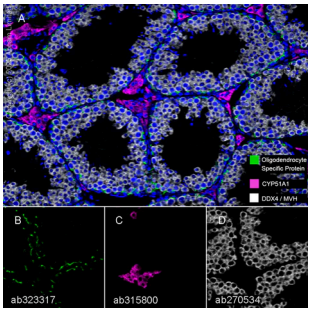
Panel D: anti-DDX4/MVH staining spermatogonia in rat testis.

Nuclear DNA was labeled with DAPI (shown in blue).

The section was incubated in three rounds of staining: in the order of ab323317, ab315800 and ab270534 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20 mins.



Multiplex immunohistochemistry - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Multiplex immunohistochemistry staining of Mouse testis using rabbit Anti-CYP51A1/CYP51 antibody

Multiplex immunohistochemistry analysis of formalin/PFA-fixed paraffin-embedded mouse testis tissue staining Oligodendrocyte Specific Protein with ab323317 at a 1/500 dilution, ab315800 anti-CYP51A1 used at 1/2000 dilution and ab270534 anti-DDX4/MVH used at a 1/2000 dilution.
Panel A: anti-Oligodendrocyte Specific Protein (green; Opal™520), anti-CYP51A1 (magenta; Opal™690) and anti-DDX/MVH (gray; Opal™570) on human testis.

Panel B: anti-Oligodendrocyte Specific Protein staining apical Sertoli cell crypts in mouse testis.

Panel C: anti-CYP51A1 staining Leydig cells in mouse testis.

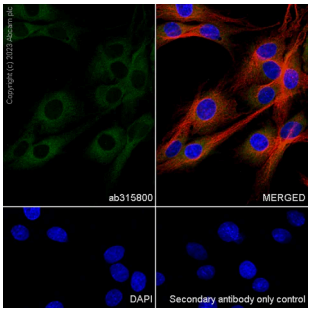
Panel D: anti-DDX4/MVH staining spermatogonia in mouse testis.

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The section was incubated in three rounds of staining: in the order of ab323317, ab315800 and ab270534 for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. Image acquisition was performed with Leica SP8 confocal microscope.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20 mins.



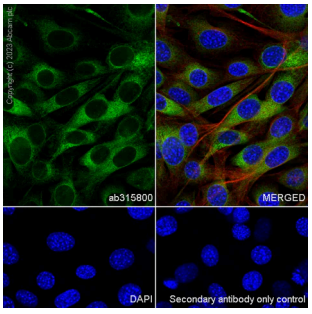
Immunocytochemistry/ Immunofluorescence - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized C6 (rat glial tumor glial cell) cells labelling CYP51A1/CYP51 with ab315800 at 1/50 (10.38 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/mL) dilution (Green).

Confocal image showing cytoplasmic staining in C6 cell line.
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/mL) dilution.



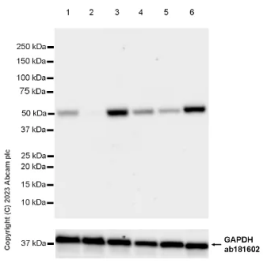
Immunocytochemistry/ Immunofluorescence - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized NIH/3T3 (mouse embryonic fibroblast) cells labelling CYP51A1/CYP51 with ab315800 at 1/50 (10.38 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/mL) dilution (Green).

Confocal image showing cytoplasmic staining in NIH/3T3 cell line.
Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/mL) dilution.



Western blot - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Western blot staining using rabbit Anti-CYP51A1/CYP51 antibody

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800) at 1/1000 dilution

Lane 1:
HEK-293 (human embryonic kidney epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:
HEK-293 transfected with siRNA specifically targeting CYP51A1 whole cell lysate at 20 µg

Lane 3:
Huh7 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
HEK-293 (human embryonic kidney epithelial cell) whole cell lysate at 20 µg

Lane 5:
MCF7 (human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

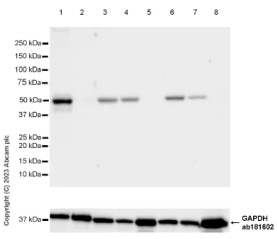
Lane 6:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 51 kDa, 36 kDa

Exposure time: 37s



Western blot - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800)

CYP51A1/CYP51 Western blot staining using rabbit Anti-CYP51A1/CYP51 antibody

Negative control: skeletal muscle.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-CYP51A1/CYP51 antibody [EPR27379-150] (ab315800) at 1/1000 dilution

Lane 1:
Human testis tissue lysate at 20 µg

Lane 2:
Human skeletal muscle tissue lysate at 20 µg

Lane 3:
Mouse liver tissue lysate at 20 µg

Lane 4:
Mouse testis tissue lysate at 20 µg

Lane 5:
Mouse skeletal muscle tissue lysate at 20 µg

Lane 6:
Rat liver tissue lysate at 20 µg

Lane 7:
Rat testis tissue lysate at 20 µg

Lane 8:
Rat skeletal muscle tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 51 kDa, 36 kDa

Exposure time: 26s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.