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Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8)

Catalog # ABO15108

Specification

Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8) - Product Information

Application	**WB, IF, ICC**
Primary Accession	P14060
Host	**Mouse**
Isotype	**Mouse IgG2b**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8) . Tested in IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8) - Additional Information

Gene ID 3283

Other Names
3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type 1, 3 beta-hydroxysteroid dehydrogenase/Delta 5-->4-isomerase type I, 3-beta-HSD I, 3-beta-hydroxy-5-ene steroid dehydrogenase, 3-beta-hydroxy-Delta(5)-steroid dehydrogenase, 1.1.1.145, 3-beta-hydroxysteroid 3-dehydrogenase, 1.1.1.270, Delta-5-3-ketosteroid isomerase, Dihydrotestosterone oxidoreductase, 1.1.1.210, Steroid Delta-isomerase, 5.3.3.1, Trophoblast antigen FDO161G, HSD3B1 (HGNC:5217), 3BH, HSDB3A

Calculated MW
42 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat
Immunocytochemistry/Immunofluorescence, 5 µg/ml, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human HSD3B1 recombinant protein (Position: Q17-Q373).

Purification
Immunogen affinity purified.

Storage	**At -20°C for one year from date of receipt.**

After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8) - Protein Information

Name HSD3B1 (HGNC:5217)

Synonyms 3BH, HSDB3A

Function
A bifunctional enzyme responsible for the oxidation and isomerization of 3beta-hydroxy-Delta(5)-steroid precursors to 3-oxo- Delta(4)-steroids, an essential step in steroid hormone biosynthesis. Specifically catalyzes the conversion of pregnenolone to progesterone, 17alpha-hydroxypregnenolone to 17alpha-hydroxyprogesterone, dehydroepiandrosterone (DHEA) to 4-androstenedione, and androstenediol to testosterone. Additionally, catalyzes the interconversion between 3beta-hydroxy and 3-oxo-5alpha-androstane steroids controlling the bioavalability of the active forms. Specifically converts dihydrotestosterone to its inactive form 5alpha-androstanediol, that does not bind androgen receptor/AR. Also converts androstanedione, a precursor of testosterone and estrone, to epiandrosterone (PubMed:1401999, PubMed:2139411). Expected to use NAD(+) as preferred electron donor for the 3beta-hydroxy-steroid dehydrogenase activity and NADPH for the 3-ketosteroid reductase activity (Probable).

Cellular Location
Endoplasmic reticulum membrane; Single-pass membrane protein. Mitochondrion membrane; Single-pass membrane protein

Tissue Location
Placenta and skin (PubMed:1401999). Predominantly expressed in mammary gland tissue.

Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8) - Images

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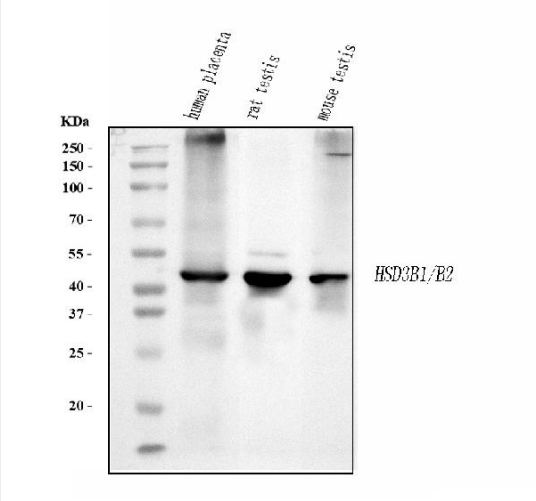

Figure 1. Western blot analysis of HSD3B1 using anti-HSD3B1 antibody (M02856).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human placenta tissue lysates,
Lane 2: rat testis tissue lysates,
Lane 3: mouse testis tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-HSD3B1 antigen affinity purified monoclonal antibody (Catalog # M02856) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for HSD3B1 at approximately 42 kDa. The expected band size for HSD3B1 is at 42 kDa.

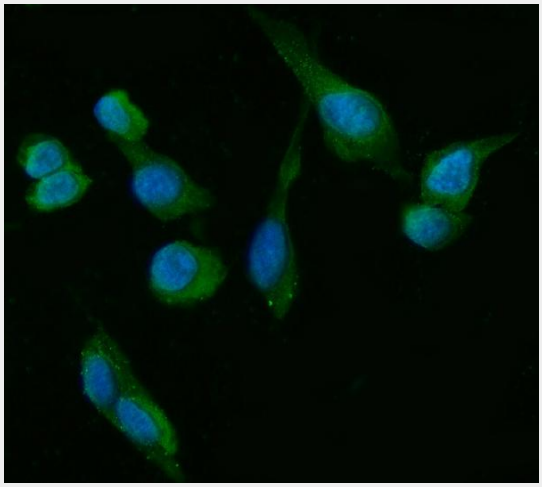

Figure 2. IF analysis of HSD3B1 using anti-HSD3B1 antibody (M02856).
HSD3B1 was detected in an immunocytochemical section of U20S cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 µg/mL mouse anti-HSD3B1 Antibody (M02856) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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Anti-HSD3B1 Antibody Picoband™ (monoclonal, 3F3C/7F9C8) - Background

HSD3B1 is a human gene that encodes for a 3beta-hydroxysteroid dehydrogenase/delta(5)-delta(4)isomerase type I or hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1. It is mapped to 1p12. The protein encoded by this gene is an enzyme that catalyzes the oxidative conversion of delta-5-3-beta-hydroxysteroid precursors into delta-4-ketosteroids, which leads to the production of all classes of steroid hormones. The encoded protein also catalyzes the interconversion of 3-beta-hydroxy- and 3-keto-5-alpha-androstane steroids.