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AKR1C1/2 Recombinant Rabbit mAb

Catalog # AP96661

Product Information

Application	WB
Primary Accession	Q04828
Other Accession	Q04828
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	36788
Physical State	Liquid
Immunogen	A synthesized peptide derived from human AKR1C1
Epitope Specificity	50-101/323
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the aldo/keto reductase family.
SUBUNIT	Monomer.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	In the liver and intestine, may have a role in the transport of bile. May have a role in monitoring the intrahepatic bile acid concentration. Has a low bile-binding ability. May play a role in myelin formation.

Additional Information

Gene ID	1645
Other Names	2-ALPHA-HSD; 20-ALPHA-HSD; C9; DD1; DD1/DD2; DDH; DDH1; H-37; HAKRC; HBAB; MBAB; Akr1c6; Hsd17b5; AK1C1_HUMAN; AKR1C1; 20-alpha-hydroxysteroid dehydrogenase (20-alpha-HSD); Chlordecone reductase homolog HAKRC; Dihydrodiol dehydrogenase 1 (DD1); High-affinity hepatic bile acid-binding protein (HBAB); 1.1.1.-; 1.1.1.112; 1.1.1.209; 1.1.1.210; 1.1.1.357; 1.1.1.51; 1.1.1.53; 1.1.1.62; 1.3.1.20; aldo-keto reductase family 1 member C1; aldo-keto reductase family 1, member C1 (dihydrodiol dehydrogenase 1; 20-alpha (3-alpha)-hydroxysteroid dehydrogenase); dihydrodiol dehydrogenase 1; 20-alpha (3-alpha)-hydroxysteroid dehydrogenase
Dilution	WB=1:500-2000,Flow-Cyt=1:50-100
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	AKR1C1
Synonyms	DDH, DDH1
Function	Cytosolic aldo-keto reductase that catalyzes NADPH-dependent reduction of ketosteroids to hydroxysteroids. Displays broad substrate specificity with distinct positional and stereochemistry, primarily generating 20alpha-hydroxysteroids, but also 3alpha/beta- and 17beta- hydroxysteroids (PubMed:10998348, PubMed:11013348, PubMed:14672942, PubMed:19218247, PubMed:11995921, PubMed:12604236). Involved in neurosteroid metabolism. Reduces 5alpha-dihydrodeoxycorticosterone (5-alpha-DHDOC) to neuroactive steroid 3alpha,5alpha-tetrahydrodeoxycorticosterone (3alpha,5alpha-THDOC) known to alter neural excitability via allosteric activation of gamma-aminobutyric acid type A (GABAAR) receptors. Inactivates 3alpha-hydroxy-5alpha- pregnan-20-one (3alpha,5alpha-THP) into less potent neurosteroid 3alpha,20alpha-dihydroxy-5alpha-pregnane (PubMed:11995921, PubMed:12604236). Catalyzes the reduction of progesterone to less potent progestogen (20S)-hydroxypregn-4-en-3-one likely regulating ligand availability for progesterone receptors (PubMed:10998348, PubMed:11013348, PubMed:12604236). In androgen catabolism, may predominantly act as a phase I enzyme by introducing a hydroxyl group prior to conjugation. It can nevertheless participate in the alternative phase II pathway by directly reducing sulfate- or glucuronide-conjugated androgens (PubMed:19218247). In vitro can efficiently catalyze bidirectional conversion between ketosteroids and hydroxysteroids using NADPH/NADP(+) or NADH/NAD(+) as cofactors. In vivo however, the reductase activity prevails since the major reducing cofactor NADPH inhibits NAD(+)-dependent oxidase activity (PubMed:14672942).
Cellular Location	Cytoplasm, cytosol.
Tissue Location	Expressed in all tissues tested including liver, prostate, testis, adrenal gland, brain, uterus, mammary gland and keratinocytes. Highest levels found in liver, mammary gland and brain

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