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DDX / AKR1C3 Antibody (C-Terminus)

Goat Polyclonal Antibody
Catalog # ALS12206

Specification

DDX / AKR1C3 Antibody (C-Terminus) - Product Information

Application	**WB, IHC-P, E**
Primary Accession	P42330
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Calculated MW	**37kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **E~~N/A**

DDX / AKR1C3 Antibody (C-Terminus) - Additional Information

Gene ID 8644

Other Names
Aldo-keto reductase family 1 member C3, 1.-.-.-, 17-beta-hydroxysteroid dehydrogenase type 5, 17-beta-HSD 5, 3-alpha-HSD type II, brain, 3-alpha-hydroxysteroid dehydrogenase type 2, 3-alpha-HSD type 2, 1.1.1.357, Chlordecone reductase homolog HAKRb, Dihydrodiol dehydrogenase 3, DD-3, DD3, Dihydrodiol dehydrogenase type I, HA1753, Indanol dehydrogenase, 1.1.1.112, Prostaglandin F synthase, PGFS, 1.1.1.188, Testosterone 17-beta-dehydrogenase 5, 1.1.1.239, 1.1.1.64, Trans-1, 2-dihydrobenzene-1, 2-diol dehydrogenase, 1.3.1.20, AKR1C3, DDH1, HSD17B5, KIAA0119, PGFS

Target/Specificity
Human AKR1C3.

Reconstitution & Storage
Store at -20°C. Minimize freezing and thawing.

Precautions
DDX / AKR1C3 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

DDX / AKR1C3 Antibody (C-Terminus) - Protein Information

Name AKR1C3

Function
Cytosolic aldo-keto reductase that catalyzes the NADH and NADPH-dependent reduction of ketosteroids to hydroxysteroids. Acts as a NAD(P)(H)-dependent 3-, 17- and 20-ketosteroid reductase on the steroid nucleus and side chain and regulates the metabolism of androgens, estrogens and progesterone (PubMed:<a href="http://www.uniprot.org/citations/10622721"

target="_blank">10622721, PubMed:11165022, PubMed:7650035, PubMed:9415401, PubMed:9927279). Displays the ability to catalyze both oxidation and reduction in vitro, but most probably acts as a reductase in vivo since the oxidase activity measured in vitro is inhibited by physiological concentration of NADPH (PubMed:11165022, PubMed:14672942). Acts preferentially as a 17- ketosteroid reductase and has the highest catalytic efficiency of the AKR1C enzyme for the reduction of delta4-androstenedione to form testosterone (PubMed:20036328). Reduces prostaglandin (PG) D2 to 11beta-prostaglandin F2, progesterone to 20alpha-hydroxyprogesterone and estrone to 17beta-estradiol (PubMed:10622721, PubMed:10998348, PubMed:11165022, PubMed:15047184, PubMed:19010934, PubMed:20036328). Catalyzes the transformation of the potent androgen dihydrotestosterone (DHT) into the less active form, 5-alpha-androstan-3-alpha,17-beta-diol (3-alpha-diol) (PubMed:10557352, PubMed:10998348, PubMed:11165022, PubMed:14672942, PubMed:7650035, PubMed:9415401). Also displays retinaldehyde reductase activity toward 9-cis-retinal (PubMed:21851338).

Cellular Location
Cytoplasm.

Tissue Location
Expressed in many tissues including adrenal gland, brain, kidney, liver, lung, mammary gland, placenta, small intestine, colon, spleen, prostate and testis. High expression in prostate and mammary gland. In the prostate, higher levels in epithelial cells than in stromal cells. In the brain, expressed in medulla, spinal cord, frontotemporal lobes, thalamus, subthalamic nuclei and amygdala. Weaker expression in the hippocampus, substantia nigra and caudate

DDX / AKR1C3 Antibody (C-Terminus) - 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

DDX / AKR1C3 Antibody (C-Terminus) - Images

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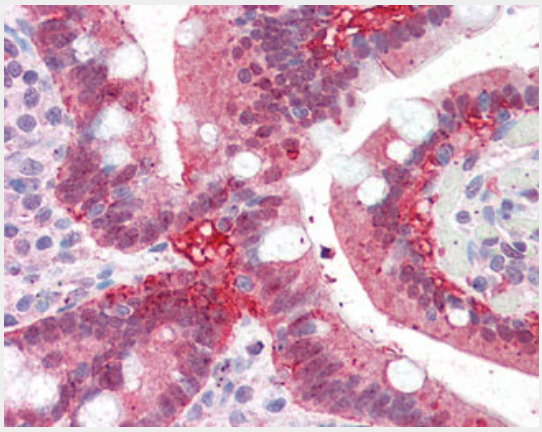

Anti-AKR1C3 antibody IHC of human small intestine.

DDX / AKR1C3 Antibody (C-Terminus) - Background

Catalyzes the conversion of aldehydes and ketones to alcohols. Catalyzes the reduction of prostaglandin (PG) D2, PGH2 and phenanthrenequinone (PQ) and the oxidation of 9-alpha,11-beta-PGF2 to PGD2. Functions as a bi-directional 3-alpha-, 17-beta- and 20-alpha HSD. Can interconvert active androgens, estrogens and progestins with their cognate inactive metabolites. Preferentially transforms androstenedione (4-dione) to testosterone.

DDX / AKR1C3 Antibody (C-Terminus) - References

Qin K.-N.,et al.J. Steroid Biochem. Mol. Biol. 46:673-679(1993).
Khanna M.,et al.J. Biol. Chem. 270:20162-20168(1995).
Khanna M.,et al.J. Steroid Biochem. Mol. Biol. 53:41-46(1995).
Lin H.-K.,et al.Mol. Endocrinol. 11:1971-1984(1997).
Suzuki-Yamamoto T.,et al.FEBS Lett. 462:335-340(1999).