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AKR1C3 Antibody

Rabbit mAb
Catalog # AP92124

Product Information

Application	WB, IF, FC, ICC, IP
Primary Accession	P42330
Reactivity	Human
Clonality	Monoclonal
Other Names	DD3; DDX; HA1753; HAKRB; HAKRe; HSD17B5; KIAA0119; hluPGFS;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	36853

Additional Information

Dilution	WB 1:500~1:1000 ICC/IF 1:50~1:200 IP 1:30 FC 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human AKR1C3
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

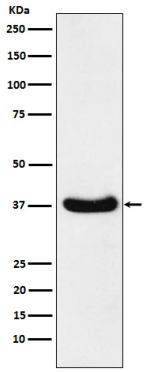
Name	AKR1C3
Function	Cytosolic aldo-keto reductase that catalyzes the NADH and NADPH-dependent reduction of ketosteroids to hydroxysteroids. Acts as a NAD(P)(H)-dependent 3-, 17- and 20-ketosteroid reductase on the steroid nucleus and side chain and regulates the metabolism of androgens, estrogens and progesterone (PubMed: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

Images



Western blot analysis of AKR1C3 expression in A549 cell lysate.