

## Recombinant Human AKR1C3 cell lysate

Cat. No. AKR1C3-49HCL Lot. No. (See product label)

### SPECIFICATION

**Species**

Human

**Description**

This gene encodes a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. These enzymes catalyze the conversion of aldehydes and ketones to their corresponding alcohols by utilizing NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme catalyzes the reduction of prostaglandin (PG) D<sub>2</sub>, PGH<sub>2</sub> and phenanthrenequinone (PQ), and the oxidation of 9 $\alpha$ ,11 $\beta$ -PGF<sub>2</sub> to PGD<sub>2</sub>. It may play an important role in the pathogenesis of allergic diseases such as asthma, and may also have a role in controlling cell growth and/or differentiation. This gene shares high sequence identity with three other gene members and is clustered with those three genes at chromosome 10p15-p14.

**Size**

100 ul

**Storage Buffer**

1X Sample Buffer (50 mM Tris-HCl, 2% SDS, 10% glycerol, 300 mM 2-mercaptoethanol, 0.01% Bromophenol blue)

**Applications**

Western Blot;

### GENE INFORMATION

**Gene Name**

AKR1C3 aldo-keto reductase family 1, member C3 (3- $\alpha$  hydroxysteroid dehydrogenase, type II) [ Homo sapiens ]

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<b>Official Symbol</b>	AKR1C3
<b>Synonyms</b>	AKR1C3; aldo-keto reductase family 1, member C3 (3-alpha hydroxysteroid dehydrogenase, type II); HSD17B5, hydroxysteroid (17 beta) dehydrogenase 5; aldo-keto reductase family 1 member C3; DDX; dihydrodiol dehydrogenase X; HAKRB; KIAA0119; PGFS; prostaglandin F synthase; indanol dehydrogenase; 3-alpha-HSD type II, brain; dihydrodiol dehydrogenase 3; chlordecone reductase homolog HAKRb; testosterone 17-beta-dehydrogenase 5; type IIb 3-alpha hydroxysteroid dehydrogenase; trans-1,2-dihydrobenzene-1,2-diol dehydrogenase; DD3; HAKRe; HA1753; HSD17B5; hluPGFS;
<b>Gene ID</b>	<a href="#">8644</a>
<b>mRNA Refseq</b>	<a href="#">NM_001253909</a>
<b>Protein Refseq</b>	<a href="#">NP_001240838</a>
<b>MIM</b>	<a href="#">603966</a>
<b>UniProt ID</b>	<a href="#">P42330</a>
<b>Chromosome Location</b>	10p15-p14
<b>Pathway</b>	Arachidonic acid metabolism, organism-specific biosystem; Arachidonic acid metabolism, conserved biosystem; Metabolism of xenobiotics by cytochrome P450, organism-specific biosystem; Metabolism of xenobiotics by cytochrome P450, conserved biosystem; Steroid hormone biosynthesis, organism-specific biosystem; Steroid hormone biosynthesis, conserved biosystem; androgen biosynthesis, organism-specific biosystem;

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**Function**

15-hydroxyprostaglandin-D dehydrogenase (NADP+) activity; alditol:NADP+ 1-oxidoreductase activity; aldo-keto reductase (NADP) activity; androsterone dehydrogenase (A-specific) activity; androsterone dehydrogenase activity; delta4-3-oxosteroid 5beta-reductase activity; dihydrotestosterone 17-beta-dehydrogenase activity; geranylgeranyl reductase activity; indanol dehydrogenase activity; ketoreductase activity; ketosteroid monooxygenase activity; oxidoreductase activity, acting on NADH or NADPH, quinone or similar compound as acceptor; phenanthrene 9,10-monooxygenase activity; prostaglandin F receptor activity; prostaglandin-F synthase activity; retinal dehydrogenase activity; retinol dehydrogenase activity; testosterone 17-beta-dehydrogenase (NAD+) activity; testosterone 17-beta-dehydrogenase (NADP+) activity; trans-1,2-dihydrobenzene-1,2-diol dehydrogenase activity;

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