

## AKR1C1 Human

**Description:**AKR1C1 Human Recombinant fused to 20 amino acid His Tag at N-terminal produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 343 amino acids (1-323 a.a.)and having a molecular mass of 38.9 kDa. The AKR1C1 is purified by proprietary chromatographic techniques.

Catalog #:ENPS-503

For research use only.

**Synonyms:**DDH1, DDH, HAKRC, 20-alpha-HSD, DD1/DD2, HBAB, C9, DD1, H-37, MBAB, MGC8954, 2-ALPHA-HSD, AKR1C1, Aldo-keto reductase family 1 member C1, 20-alpha-hydroxysteroid dehydrogenase, Trans-1,2-dihydrobenzene-1,2-diol dehydrogenase, Indanol dehydrogenase, Dihydr

**Source:**Escherichia Coli.

**Physical Appearance:**Sterile Filtered clear colorless solution.

**Amino Acid Sequence:**MGSSHHHHHH SSGLVPRGSH MDSKYQCVKL NDGHFMPVLG  
FGTYAPAEVP KSKALEATKL AIEAGFRHID SAHLYNNEEQ VGLAIRSKIA DGSVKREDIF  
YTSKLCWNSH RPELVPALE RSLKNLQLDY VDLYLIHFPV SVKPGEEVIP KDENGKILFD  
TVDLCATWEA VEKCKDAGLA KSIGVSNFNR RQLEMILNKP GLKYKPVNCQ VECHPYFNQR  
KLLDFCKSKDIVL

**Purity:**Greater than 90% as determined by SDS-PAGE.

### Formulation:

The AKR1C1 solution contains 20mM Tris-HCl pH-8, 1mM DTT and 20% glycerol.

### Stability:

AKR1C1 Recombinant Human although stable at 4°C for 30 days, should be stored desiccated below -20°C for periods greater than 30 days. Please avoid freeze-thaw cycles.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### Introduction:

AKR1C1 transfers progesterone to its inactive state or in other words catalyzes the reaction of 20-alpha-hydroxy progesterone (20-alpha-OHP). In the liver and intestine. AKR1C1 transfers bile and monitors the intrahepatic bile acid concentration though it has a low bile-binding ability. AKR1C1 participates in myelin formation. AKR1C1 is part of the aldo/keto reductase superfamily, which has over 40 known enzymes which catalyze the conversion of aldehydes and ketones to their corresponding alcohols by utilizing NADH and/or NADPH as cofactors thus display overlapping but distinct substrate specificity.

### Biological Activity:

Specific activity: approximately 0.15 - 0.2 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme catalyzing the oxidation of 1 micromole NADPH per minute at 25C. Specific activity was expressed as units/mg protein.

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