# Human Recombinant AKR1C1

**CATALOG #:** 6336-100 100 µg

**ALTERNATE NAMES:** Aldo-keto reductase family 1, member C 1, 20-alpha-HSD, DD1/DD2, HBAB, DDH, DDH1

**SOURCE:** E.Coli

**PURITY:** > 90% by SDS - PAGE

**MOL. WEIGHT:** 38.9 kDa (343 aa, 1-323 aa + His Tag)

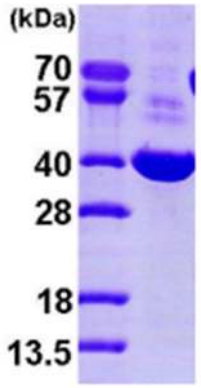
**FORMULATION:** 0.5 mg/ml solution in 20 mM Tris-HCl buffer (pH 8.0) containing 1 mM DTT and 20% glycerol.

**STORAGE CONDITIONS:**
Can be stored at 4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

**DESCRIPTION**:
Aldo-keto reductase family 1 member C1 in humans is encoded by the AKR1C1 gene. 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.

**AMINO ACID SEQUENCE:**
MGSSHHHHHH SSGLVPRGSH MDSKYQCVKL NDGHFMPVLG FGTYAPAEVP KSKALEATKL AIEAGFRHID SAHLYNNEEQ VGLAIRSKIA DGSVKREDIF YTSKLWCNSH RPELVRPALE RSLKNLQLDY VDLYLIHFPV SVKPGEEVIP KDENGKILFD TVDLCATWEA VEKCKDAGLA KSIGVSNFNR RQLEMILNKP GLKYKPVCNQ VECHPYFNQR KLLDFCKSKD IVLVAYSALG SHREEPWVDP NSPVLLEDPV LCALAKKHKR TPALIALRYQ LQRGVVVLAK SYNEQRIRQN VQVFEFQLTS EEMKAIDGLN RNVRYLTLDI FAGPPNYPFS DEY

**BIOLOGICAL ACTIVITY:**
Specific activity is 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 25°C. Specific activity was expressed as units/mg protein.




15% SDS-PAGE (3ug)

Human Recombinant AKR1C1

**RELATED PRODUCTS:**

- Aldehyde Dehydrogenase Activity Colorimetric Assay kit **(Cat. No. K731-100)**
- PicoProbe™ Aldehyde Dehydrogenase Activity Assay kit **(Cat. No. K741-100)**
- Human recombinant ALDH2 **(Cat. No. 6332-100)**
- Human recombinant ALDH3A1 **(Cat. No. 6333-50)**
- Human recombinant AKR7A3 **(Cat. No. 6334-50)**
- Human recombinant AKR7A2 **(Cat. No. 6335-50)**
- Human recombinant AKR1B10 **(Cat. No. 6339-50)**
- Human recombinant AKR1C3 **(Cat. No. 6337-50)**
- Human recombinant AKR1C4 **(Cat. No. 6338-50)**
-

***FOR RESEARCH USE ONLY! Not to be used in humans.***