

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Aldo-keto Reductase 1C4/AKR1C4 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) AKR-1C1 and rhAKR-1C3 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Aldo-keto Reductase 1C4/AKR1C4 Met1-Tyr323 Accession # NP_001809
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### BACKGROUND

AKR1C4 (Aldo-Keto Reductase family 1 member C4; also 3-αHSD1/3-αHSD type 1, Chlordecone/kepone reductase/CDR and DD4) is a monomeric, 36-38 kDa member of the four gene 3-αHSD family, aldo-keto reductase superfamily of enzymes. AKRs catalyse the reduction of aldehydes and ketones into alcohols through a NADPH-dependent process. The resulting alcohols become the target of subsequent conjugation reactions. AKR1C4 in particular is noted for its action on dihydroxytestosterone, converting it to a less active 3α-diol. In addition, it also converts progesterone into 20α-hydroxyprogesterone, a molecule that both induces GnRH release, and blocks the generation of (deoxy)cortisol from 17α-hydroxyprogesterone. Finally, AKR1C4 likely is involved in the detoxification of xenobiotics and drugs. AKR1C4 expression is essentially limited to hepatocytes and likely breast epithelium. Human AKR1C4 is 323 amino acids (aa) in length. Full-length human AKR1C4 shares 83% and 76% aa sequence identity with human AKR1C1 and mouse AKR1C4, respectively.

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.