

DESCRIPTION

Species Reactivity	Human
Specificity	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.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Aldo-keto Reductase 1C4/AKR1C4 Met1-Tyr323 Accession # NP_001809
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	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.

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