

DESCRIPTION

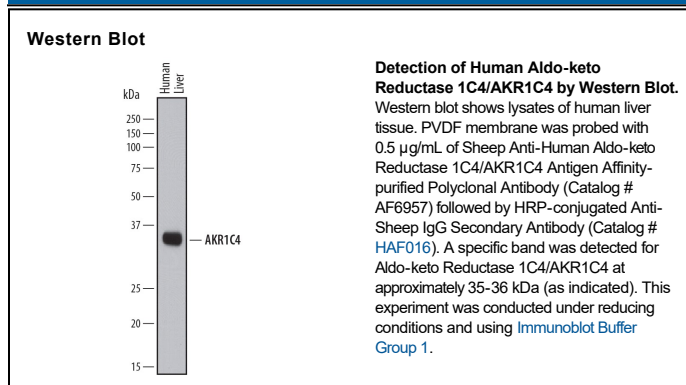
Species Reactivity	Human
Specificity	Detects human Aldo-keto Reductase 1C4/AKR1C4 in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) AKR-1C1 and rhAKR-1C3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Aldo-keto Reductase 1C4/AKR1C4 Met1-Tyr323 Accession # NP_001809
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 tetroxification 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.