ALPHA DIAGNOSTIC INTERNATIONAL

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Product Specification Sheet

CYTOCHROME P450 (CYP26A1) Antibodies

Cat. CYP26A11-A	Rabbit Anti- Human CYP26A1 (aff pure) Ig G # 1	**SIZE**: 100 ug
Cat. CYP26A11-P	Human CYP26A1 Control peptide #1	**SIZE**: 100 ug

Cytochrome P450 (P450 or CYP) enzymes, a superfamily of *b*-type heme-containing proteins found in organisms from all domains of life, are major catalysts in the oxidative transformation of a diversity of endogenous and exogenous compounds. CYP enzymes play an important role in the metabolic activation of environmental procarcinogens or chemical carcinogenesis, these enzymes are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. The enzyme localizes to the endoplasmic reticulum and metabolizes procarcinogens such as polycyclic aromatic hydrocarbons and 17beta-estradiol. Mutations in this gene have been associated with primary congenital glaucoma; therefore it is thought that the enzyme also metabolizes a signaling molecule involved in eye development, possibly a steroid.

The CYP enzymes exist is several isoforms, as regards to their conservation of structural characteristics and differences to their electron supplying redox partners.

CYP26A1 (Cytochrome P450, family 26, subfamily A, polypeptide 1) a 497aa enzyme in mouse, rat and human (chr 10q23), a distinct composite retinoic acid response element underlies the complex regulation of retinoic acid metabolism. This endoplasmic reticulum protein acts on retinoids, including all-trans-retinoic acid (RA), with both 4-hydroxylation and 18-hydroxylation activities. This enzyme regulates the cellular level of retinoic acid which is involved in the regulation of gene expression in both embryonic and adult tissues. Highest levels of expression are noticed in adult liver, heart, pituitary gland, adrenal gland, placenta and regions of the brain.

Source of Antigen and Antibodies

Antigen	15aa peptide of Human CYP26A1 (refs 1, protein # O43174, **designated (CYP26A11-P or control peptide).** conjugated to KLH ; epitope location ~ N-terminus
Ab Host/type	Rabbit, polyclonal Aff pure IgG (**cat # CYP26A11-A**) purified over antigen-agarose column
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	Cat # **20009-1**, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
100 ug/100ul solution lyophilized powder
supplied in **Buffer**: 100 mM Tris, pH 7.5; 0.2% BSA,
Reconstitute in PBS at 1 mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
supplied in buffer: PBS pH 7.5,
Reconstitute in PBS at 1 mg/ml

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure using Chemiluminescence technique). See refs in 2

ELISA (1:100K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: we recommend the use of affinity purified antibody at 2-20 ug/ml in formaldehyde fixed tissue. See refs in 2

Specificity & Cross-reactivity

Human CYP26A11-P sequence shows 100% homology with human, mouse, rat and 73% in chicken CYP26A1. Antibody crossreactivity in various species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References: (1) Niederreither, K (2002) Nature Genet. 31: 84-88; White J. A (1997) JBC. 272: 18538-18541; White, J. A (1998) Genomics 48: 270-272; McSorley, L. C (2000) Biochem Pharmacol. 60 (4), 517-526.

2. Citations of for ADI Antibodies (see updates at the web site)

Chang C-L, 2007, Oncogene in press, IF
Catherino WH, 2007, Fertility and Sterility, 87, 1388-1398, WB
Heise R, 2006, Journal of Investigative Dermatology 126, 2473 - 2480,
Villani MG, 2004, Clin. Cancer Res., 10: 6265 - 6275, WB

*This product is for in vitro research use only.

Some New Antibodies from ADI...

• **Neurotransmitter Transporters** • Acetylcholine • BGT-1 • Dopamine • GABA (GAT1, -2, -3) • VGAT • Glycine (Glyt 1, 2) • Glutamate (GLT1, GLAST, EAAC1) • Serotonin • Proline, Vesicular GABA Transporter (VGAT) • NET • Tauriine • **Renal Physiology** Arginine Vasopressin Receptors 1/2 • Aquaporins (AQP 1-5) and Urea transporter (RUT2)

CYP26A11-A-P 71217A

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A;

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400 Fax: +91-11-42208444 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com