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### Certificate of Analysis

**Product:** Affinity Purified Anti-ABCB5 [Rabbit]

**Code:** 600-401-A77S

**Lot #** 21373

**Size:** 25  $\mu$ l

**Physical State:** Liquid (sterile filtered)

**Antibody Concentration:** 0.31 mg/ml (by UV absorbance at 280 nm)

**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

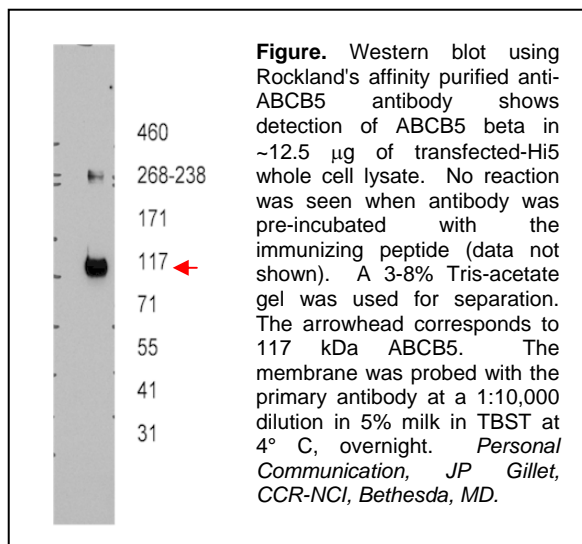
**Stabilizer:** None

**Preservative:** 0.01% (w/v) Sodium Azide

**Storage Conditions for Trial Size:** Store vial at  $-20^{\circ}$  C or below prior to opening. This vial contains a relatively low volume of reagent (25  $\mu$ l). To minimize loss of volume dilute 1:10 by adding 225  $\mu$ l of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at  $-20^{\circ}$  C or below after dilution. Avoid cycles of freezing and thawing. Expiration date is three (3) months from date of opening.

**Background Information:** ATP-Binding Cassette proteins comprise a superfamily of transporters with a wide variety of substrates. ABCB5 is a novel member of the human P-glycoprotein family. It functions as a determinant of membrane potential and regulator of cell fusion in physiologic skin progenitor cells. Cell fusion is thought to contribute to tissue differentiation. ABCB5 is predominantly expressed in melanoma cells and is a novel molecular marker for a distinct subset of chemoresistant stem cell phenotype-expressing tumor cells among human epidermal melanocytes. It has been identified as a novel drug transporter in human malignant melanoma. ABCB5 is a rhodamine efflux transporter. This antibody product is intended to be used to confirm cellular localization and expression level of ABCB5.

**Application Note(s):** This affinity purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 117 kDa in size corresponding to ABCB5 by western blotting in the appropriate cell lysate or extract.



#### Recommended Dilutions:

ELISA	1:10,000 - 1:15,000
WESTERN BLOT	1:10,000
IF MICROSCOPY	User Optimized
OTHER APPLICATIONS	User Optimized

**Purity and Specificity:** This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is specific for human ABCB5 protein. A BLAST analysis was used to suggest partial cross-reactivity with ABCB5 from monkey (85% homology), rat (68% homology) and mouse (62% homology) sources. Cross-reactivity with ABCB5 from other sources has not been determined.

**Immunogen:** This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to residues corresponding to an internal region of human ABCB5.

**Relevant Links:** NCBI [AAW31630](#) Swiss-Prot [Q515Q7](#)

#### Related Products:

#[611-703-127](#) Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10  
 #[611-132-122](#) IRDye® 800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10  
 #[611-145-122](#) DyLight™800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10  
 #[B501-0500](#) BLOTTO (500 g)  
 #[BSA-30](#) 30% BOVINE SERUM ALBUMIN SOL'N in 0.85% sodium chloride (no preservative or stabilizer) (500 ml)  
 #[B304](#) NORMAL GOAT SERUM (NGS) (10 ml)  
 #[KIA-003](#) **MaxTag™** Anti-RABBIT IgG Kit for Immunoblotting  
 #[MB-070](#) Blocking Buffer for Fluorescent Western Blotting

#### General References:

Frank NY, Margaryan A, Huang Y, Schatton T, Waaga-Gasser AM, Gasser M, Sayegh MH, Sadee W, Frank MH. (2005) ABCB5-mediated doxorubicin transport and chemoresistance in human malignant melanoma. *Cancer Res.* 65(10):4320-33.

Chen KG, Szakacs G, Annereau JP, Rouzaud F, Liang XJ, Valencia JC, Nagineni CN, Hooks JJ, Hearing VJ, Gottesman MM. (2005) Principal expression of two mRNA isoforms (ABCB 5alpha and ABCB 5beta ) of the ATP-binding cassette transporter gene ABCB 5 in melanoma cells and melanocytes. *Pigment Cell Res.* 18(2):102-12.

Chen KG, Gottesman MM. (2005) Useful tool to generate unidirectional deletion vectors by utilizing the star activity of BamHI in an NcoI-BamHI-XhoI cassette. *Biotechniques.* 38(2):198, 200, 202, 204.

Huang Y, Anderle P, Bussey KJ, Barbacioru C, Shankavaram U, Dai Z, Reinhold WC, Papp A, Weinstein JN, Sadee W. (2004) Membrane transporters and channels: role of the transportome in cancer chemosensitivity and chemoresistance. *Cancer Res.* 64(12):4294-301.

Frank NY, Pendse SS, Lapchak PH, Margaryan A, Shlain D, Doeing C, Sayegh MH, Frank MH. (2003) Regulation of progenitor cell fusion by ABCB5 P-glycoprotein, a novel human ATP-binding cassette transporter. *J Biol Chem.* 278(47):47156-65.

Taipalensuu J, Tornblom H, Lindberg G, Einarsson C, Sjoqvist F, Melhus H, Garberg P, Sjoström B, Lundgren B, Artursson P. (2001) Correlation of gene expression of ten drug efflux proteins of the ATP-binding cassette transporter family in normal human jejunum and in human intestinal epithelial Caco-2 cell monolayers. *J Pharmacol Exp Ther.* 299(1):164-70.

**Note:** This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 326, Gilbertsville, Pennsylvania, USA.