

AP09395PU-N**Polyclonal Antibody to ABCB5 - Aff - Purified**

Alternate names:	ATP-binding cassette sub-family B member 5
Quantity:	0.1 mg
Concentration:	1.29 mg/ml (AP09395PU-N) / 0.31 mg/ml (AP09395PU-S) - by UV absorbance at 280 nm
Background:	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.
Uniprot ID:	Q2M3G0
NCBI:	NP_001157413.1
GenelD:	340273
Host / Isotype:	Rabbit / IgG
Immunogen:	Synthetic peptide corresponding to residues corresponding to an internal region of Human ABCB5
Format:	State: Liquid purified Ig fraction Purification: Affinity Chromatography Buffer System: 0.02M Potassium Phosphate, 0.15M Sodium Chloride, pH 7.2 containing 0.01% (w/v) Sodium Azide
Applications:	ELISA: 1/10,000-1/50,000. Western Blot: 1/20,000. <u>Trial Size:</u> ELISA: 1/10,000- 1/15,000. Western Blot: 1/10,000. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody is specific for ABCB5 protein.
Species Reactivity:	Tested: Human. Expected from sequence similarity: Monkey (85%), Rat (68%), Mouse (62%).

Storage: Store the antibody at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Storage Conditions for Trial Size:

This vial contains a relatively low volume of reagent (25 µl). To minimize loss of volume dilute 1:10 by adding 225 µl 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.

Shelf life: 3 month from despatch.

General Readings:

1. Frank NY, Margaryan A, Huang Y, Schatton T, Waaga-Gasser AM, Gasser M, et al. ABCB5-mediated doxorubicin transport and chemoresistance in human malignant melanoma. *Cancer Res.* 2005 May 15;65(10):4320-33. PubMed PMID: 15899824.
2. Chen KG, Szakács G, Annereau JP, Rouzaud F, Liang XJ, Valencia JC, et al. 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.* 2005 Apr;18(2):102-12. PubMed PMID: 15760339.
3. Chen KG, Gottesman MM. Useful tool to generate unidirectional deletion vectors by utilizing the star activity of BamHI in an NcoI-BamHI-XhoI cassette. *Biotechniques.* 2005 Feb;38(2):198, 200, 202, 204. PubMed PMID: 15727125.
4. Huang Y, Anderle P, Bussey KJ, Barbacioru C, Shankavaram U, Dai Z, et al. Membrane transporters and channels: role of the transportome in cancer chemosensitivity and chemoresistance. *Cancer Res.* 2004 Jun 15;64(12):4294-301. PubMed PMID: 15205344.
5. Frank NY, Pendse SS, Lapchak PH, Margaryan A, Shlain D, Doeing C, et al. Regulation of progenitor cell fusion by ABCB5 P-glycoprotein, a novel human ATP-binding cassette transporter. *J Biol Chem.* 2003 Nov 21;278(47):47156-65. Epub 2003 Sep 7. PubMed PMID: 12960149.
6. Taipalensuu J, Törnblom H, Lindberg G, Einarsson C, Sjöqvist F, Melhus H, et al. 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.* 2001 Oct;299(1):164-70. PubMed PMID: 11561076.

Pictures:

Western blot using affinity purified anti-ABCB5 antibody shows detection of ABCB5 beta in ~12.5 µg of transfected-Hi5 whole cell lysate. No reaction was seen when antibody was pre-incubated with the immunizing peptide (data not shown). A 3-8% Tris-acetate gel was used for separation. The arrowhead corresponds to 117 kDa ABCB5. The membrane was probed with the primary antibody at a 1:10,000 dilution in 5% milk in TBST at 4° C, overnight.

