10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ABCB5 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6122a

Product Information

Application	WB, FC, E
Primary Accession	Q2M3G0
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	138641
Antigen Region	1-30

Additional Information

Gene ID	340273
Other Names	ATP-binding cassette sub-family B member 5, ABCB5 P-gp, P-glycoprotein ABCB5, ABCB5
Target/Specificity	This ABCB5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human ABCB5.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ABCB5 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ABCB5 (HGNC:46)
Function	Energy-dependent efflux transporter responsible for decreased drug accumulation in multidrug-resistant cells (PubMed:12960149, PubMed:15205344, PubMed:15899824, PubMed:22306008). Specifically present in limbal stem cells, where it plays a key role in corneal development and repair (By similarity).

Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000255|PROSITE-ProRule:PRU00441, ECO:0000269|PubMed:12960149}
Tissue Location	Expressed by CD133-expressing progenitor cells among epidermal melanocytes (at protein level). Widely expressed with specific expression in pigment cells. Highly expressed in several malignant tissues: highly expressed in clinical melanomas, with low expression in normal skin. In melanoma, marks malignant melanoma- initiating cells (MMIC), in which clinical virulence resides as a consequence of unlimited self-renewal capacity, resulting in inexorable tumor progression and metastasis. Also highly expressed in a number of leukemia cells. Expressed in basal limbal epithelium

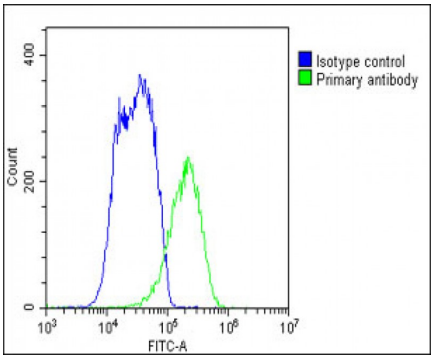
Background

ABCB5 belongs to the ATP-binding cassette (ABC) transporter superfamily of integral membrane proteins. These proteins participate in ATP-dependent transmembrane transport of structurally diverse molecules ranging from small ions, sugars, and peptides to more complex organic molecules.

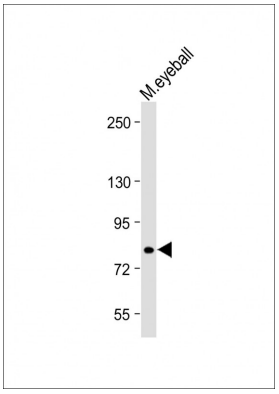
References

Frank,N.Y., Cancer Res. 65 (10), 4320-4333 (2005) Chen,K.G., Pigment Cell Res. 18 (2), 102-112 (2005) Frank,N.Y., J. Biol. Chem. 278 (47), 47156-47165 (2003)

Images

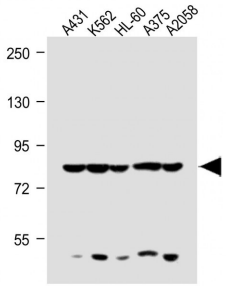


Overlay histogram showing HepG2 cells stained with AP6122a(green line). The cells were fixed with 2% paraformaldehyde 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP6122a, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Anti-ABCB5 Antibody (N-term) at 1:2000 dilution + Mouse eyeball lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 138 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes : Anti-ABCB5 Antibody (N-term) at 1:1000 dilution Lane 1: A431 whole cell lysate Lane 2: K562 whole cell lysate Lane 3: HL-60 whole cell lysate Lane 4: A375 whole cell lysate Lane 5: A2058 whole cell lysate



Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 138 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Targeting the ABC transporter ABCB5 sensitizes glioblastoma to temozolomide-induced apoptosis through a cell-cycle checkpoint regulation mechanism
- Side population cells from human melanoma tumors reveal diverse mechanisms for chemoresistance.
- CD133+ melanoma subpopulations contribute to perivascular niche morphogenesis and tumorigenicity through vasculogenic mimicry.
- Evaluation of a multi-marker immunomagnetic enrichment assay for the quantification of circulating melanoma cells.
- ABCB5 identifies a therapy-refractory tumor cell population in colorectal cancer patients.
- Melanoma spheroids grown under neural crest cell conditions are highly plastic migratory/invasive tumor cells endowed with immunomodulator function.