Cell name: HCC827 x ABCG2
Cat. No. HC-0210

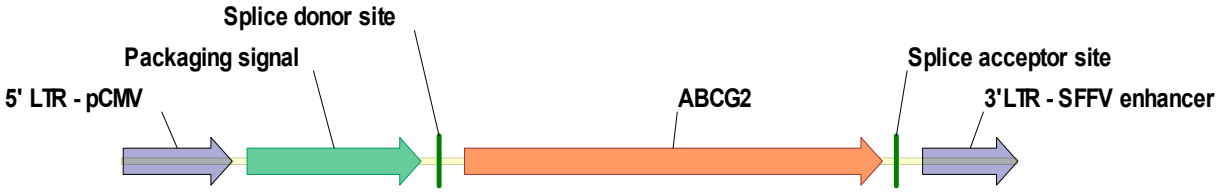
Product description

HCC827 x ABCG2 was established by retroviral transduction of human ATP-binding cassette, sub-family G, member 2 cDNA into HCC827 cells and flow cytometry sorting of the anti-Human ABCG2 (clone 5D3) immunolabeled population.

Transgene construct information

Expression cassette type
Single-promoter, monocistronic

Expression cassette map



Expression cassette features

Element	Type	Species	RefSeq	Mutation / Discrepancy
SFFV	promoter, viral, constitutive	-	-	-
ABCG2	CDS	Homo sapiens	NM_004827.2	none / none

Transgene protein information

The membrane-associated protein encoded by this gene is included in the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the White subfamily. Alternatively referred to as a breast cancer resistance protein, this protein functions as a xenobiotic transporter which may play a major role in multi-drug resistance. It likely serves as a cellular defense mechanism in response to mitoxantrone and anthracycline exposure. Significant expression of this protein has been observed in the placenta, which may suggest a potential role for this molecule in placenta tissue. Multiple transcript variants encoding different isoforms have been found for this gene. [Source: NCBI Gene, http://www.ncbi.nlm.nih.gov/gene/9429]

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Cell culture characteristics

Source
Human lung adenocarcinoma

Morphology
Epithelial

Growth properties
Adherent

Culture conditions
Culture cells at 37°C in humidified atmosphere with 5% CO_2. The base medium for this cell line is RPMI-1640 with 4.5 g/l glucose. To make the complete growth medium, add fetal bovine serum to a final concentration of 10%.

Subculturing
Remove culture medium and detach cells by treating with 0.04 mL/cm^2 of 0.25% trypsin / 1 mM EDTA solution for 10 minutes at 37°C. Add 5x volume of complete medium to neutralize trypsin-EDTA, pellet cells at 250 x *g*, discard supernatant, and resuspend in culture medium. Subcultivate in a ratio of 1:4-1:6 three times a week. Recommended plating density: 4x10^4 cells/cm^2.

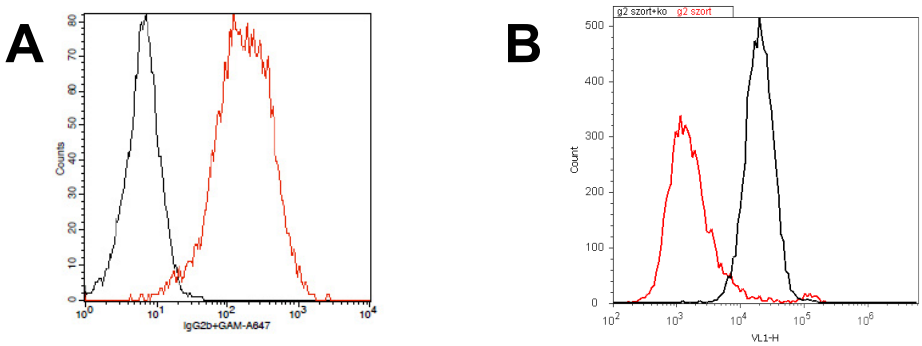
Preservation
Freeze Medium: Complete growth medium with 10% DMSO.
Storage Temperature: Liquid nitrogen vapour phase.

Population doubling time
~30 hours

Sterility testing
Mycoplasma: negative

Comment
This lung adenocarcinoma cell line has an acquired mutation in the EGFR tyrosine kinase domain (E746 - A750 deletion).

Validation results



A: Red line: HCC827 x ABCG2 cells incubated with Human ABCG2 antibody.
Black line: HCC827 x ABCG2 cells incubated with isotype control.
Indirect immunofluorescent labeling with anti-Human ABCG2 (clone: 5D3) antibody (R&D Systems®) or isotype control + AlexaFluor™ 647 labeled anti-Mouse IgG secondary antibody. Detection by flow cytometry.

B: Red line: HCC827 x ABCG2 cells incubated with Vybrant DyeCycle Violet Stain.
Black line: HCC827 x ABCG2 cells incubated with Vybrant DyeCycle Violet Stain and Ko143.
Vybrant® DyeCycle™ Violet Stain (Life technologies™) efflux detected by flow cytometry at 450 nm in the presence or absence of Ko143, a specific inhibitor of ABCG2.

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