

## Anti-Human CD338 (ABCG2) Functional Grade Purified


**Catalog Number:** 16-8888

**Also Known As:** Bcrp1, MXR

**RUO: For Research Use Only. Not for use in diagnostic procedures.**

### Product Information

**Contents:** Anti-Human CD338 (ABCG2) Functional Grade Purified

 **Catalog Number:** 16-8888

**Clone:** 5D3

**Concentration:** 1 mg/mL

**Host/Isotype:** Mouse IgG2b, kappa

**Handling Conditions:** Use in sterile environment.

**Endotoxin Level:** Less than 0.001 ng/ug antibody, as determined by the LAL assay.

**Formulation:** aqueous buffer, no sodium azide



**Temperature Limitation:** Store at 2-8°C.



**Batch Code:** Refer to Vial



**Use By:** Refer to Vial

### Description

The 5D3 monoclonal antibody reacts with the extracellular portion of the human ABCG2 protein, also known as Bcrp1 and MXR. The ABCG2 gene, a member of the multi-drug resistance (MDR) family, is highly expressed on primitive 'side-population' (SP) stem cells, which are defined by the efflux of fluorescent dyes such as Rhodamine 123 and Hoechst 33342. In the bone marrow, about 0.05% of cells display the low fluorescence and are highly enriched for repopulating cells. The SP cells, which express low or undetectable levels of CD34, have been identified in multiple species. In addition, expression of ABCG2 appears to be highly conserved.

### Applications Reported

The 5D3 antibody has been reported for use in flow cytometric analysis.

### Applications Tested

The 5D3 antibody has been tested by flow cytometric analysis of human ABCG2 transfected cells and peripheral blood leukocytes. This can be used at less than or equal to 0.5 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

### References

Basseville A, Tamaki A, Ierano C, Trostel S, Ward Y, Robey RW, Hegde RS, Bates SE. Histone deacetylase inhibitors influence chemotherapy transport by modulating expression and trafficking of a common polymorphic variant of the ABCG2 efflux transporter. *Cancer Res.* 2012 Jul 15;72(14):3642-51. (5G3,FC PubMed)

Kim M, Turnquist H, Jackson J, Sgagias M, Yan Y, Gong M, Dean M, Sharp JG, Cowan K. The multidrug resistance transporter ABCG2 (breast cancer resistance protein 1) effluxes Hoechst 33342 and is overexpressed in hematopoietic stem cells. *Clin Cancer Res.* 2002 Jan;8(1):22-8.

Scharenberg CW, Harkey MA, Torok-Storb B.. The ABCG2 transporter is an efficient Hoechst 33342 efflux pump and is preferentially expressed by immature human hemtopoietic progenitors. *Blood.* 2002 Jan 15;99(2):507-12.

Zhou S, Schuetz JD, Bunting KD, Colapietro AM, Sampath J, Morris JJ, Lagutina I, Grosveld GC, Osawa M, Nakauchi H, Sorrentino BP. The ABC transporter Bcrp1/ABCG2 is expressed in a wide variety of stem cells and is a molecular determinant of the side-population phenotype. *Nat Med.* 2001 Sep;7(9):1028-34.

Goodell MA, Rosenzweig M, Kim H, Marks DF, DeMaria M, Paradis G, Grupp SA, Sieff CA, Mulligan RC, Johnson RP. Dye efflux studies suggest that hematopoietic stem cells expressing low or undetectable levels of CD34 antigen exist in multiple species. *Nat Med.* 1997 Dec;3(12):1337-45.

### Related Products

11-4011 Anti-Mouse IgG FITC

12-4317 Streptavidin PE

13-4013 Anti-Mouse IgG Biotin (Polyclonal)

16-4732 Mouse IgG2b K Isotype Control Functional Grade Purified

