

# CD38 Monoclonal Antibody (HB7), Super Bright™ 702, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human
Host/Isotype	Mouse / IgG1, kappa
Recommended Isotype Control	Mouse IgG1 kappa Isotype Control (P3.6.2.8.1), Super Bright™ 702, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	HB7
Conjugate	Super Bright™ 702
Excitation/Emission Max	413/702 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2688216

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.125 µg)/test	3 Publications

## Product Specific Information

Description: The HB7 monoclonal antibody reacts with the human CD38 molecule, an approximately 45 kDa type II transmembrane protein. CD38 is an ectoenzyme which catalyses NAD into nicotinic acid adenine dinucleotide phosphate (NAADP) and cyclic ADP-ribose (cADPR), both of which are secondary messengers. Expression of CD38 is bimodal during B cell development, modulating from high in immature cells to low in intermediate ones and back to high on mature B cells. Additionally CD38 is found in a variety of tissues and other hematopoietic cells (e.g. T cells, NK cells and monocytes) and can be used to phenotype leukemias and monitor HIV-1 progression. The CD34+CD38- population of hematopoietic stem cells is thought to define the most pluripotent cells (e.g. blast colony forming cells). In addition to surface expression, CD38 has recently been found in the nucleus where it may play a role in monitoring calcium levels.

Applications Reported: This HB7 antibody has been reported for use in flow cytometric analysis.

Applications Tested: This HB7 antibody has been pre-diluted and tested by flow cytometric analysis of normal human peripheral blood cells. This may be used at 5 µL (0.125 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.

Super Bright 702 is a tandem dye that can be excited with the violet laser line (405 nm) and emits at 702 nm. We recommend using a 710/50 bandpass filter. Please make sure that your instrument is capable of detecting this fluorochrome.

When using two or more Super Bright dye-conjugated antibodies in a staining panel, it is recommended to use Super Bright Complete Staining Buffer (Product # SB-4401) to minimize any non-specific polymer interactions. Please refer to the datasheet

for Super Bright Staining Buffer for more information.

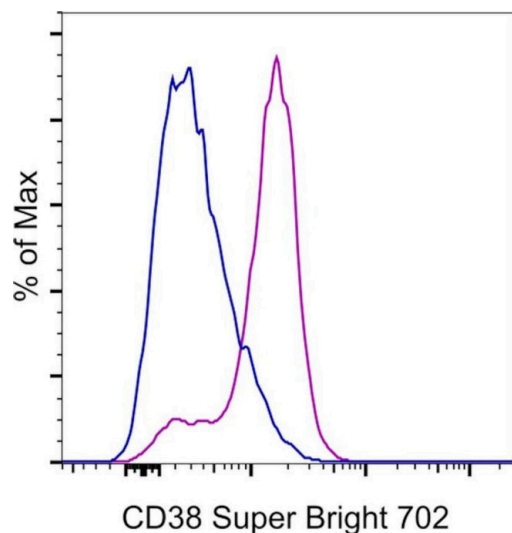
**Light sensitivity:** This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

**Fixation:** Samples can be stored in IC Fixation Buffer (Product # 00-8222) (100  $\mu$ L of cell sample + 100  $\mu$ L of IC Fixation Buffer) or 1-step Fix/Lyse Solution (Product # 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

**Excitation:** 405 nm; **Emission:** 702 nm; **Laser:** Violet Laser

Super Bright Polymer Dyes are sold under license from Becton, Dickinson and Company.

## Product Images For CD38 Monoclonal Antibody (HB7), Super Bright™ 702, eBioscience™



### CD38 Antibody (67-0388-42) in Flow

Normal human peripheral blood were stained with Mouse IgG1 K Isotype Control Super Bright 702 (Product # 67-4714-82) (blue histogram) or Anti-Human CD38 Super Bright 702 (purple histogram). Cells in the lymphocyte gate were used for analysis.

[View more figures on thermofisher.com](https://www.thermofisher.com)

## Flow Cytometry (3)

Journal of cardiovascular development and disease

### Circulating Regulatory B-Lymphocytes in Patients with Acute Myocardial Infarction: A Pilot Study.

Year  
2022

"Published figure using CD38 monoclonal antibody (Product # 67-0388-42) in Flow Cytometry"

Authors: Volodarsky I,Shimoni S,Haberman D,Mirkin V,Fabrikant Y,Yoskovich Mashriki T,Zalik A,George J

Nature chemical biology

### Small-molecule inhibitors targeting Polycomb repressive complex 1 RING domain.

Year  
2021

"Published figure using CD38 monoclonal antibody (Product # 67-0388-42) in Flow Cytometry"

Authors: Shukla S,Ying W,Gray F,Yao Y,Simes ML,Zhao Q,Miao H,Cho HJ,González-Alonso P,Winkler A,Lund G,Purohit T,Kim E,Zhang X,Ray JM,He S,Nikolaidis C,Ndoj J,Wang J,Jaremko ,Jaremko M,Ryan RJH,Guzman ML,Grembecka J,Cierpicki T

[View more Flow references on thermofisher.com](#)

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