

# Anti-Human $\beta$ -2 Microglobulin (GRH1)



REF



PURE	BETA2PU	1 mg	1 mg/ml
PURE	beta2PU-OIMG	100 test	1 $\mu$ g/test
PerCP	BETA2PP-100T	100 test	20 $\mu$ L/test
PE	BETA2PE-100T	100 test	20 $\mu$ L/test
PerCP-Cyanine5.5	BETA2PP5.5-100T	100 test	5 $\mu$ L/test

RUO

(GMP)

## 1. PRODUCT DESCRIPTION

**Clone:** GRH1;  
**Isotype:** IgG1;  
**Tested application:** flow cytometry;  
**Immunogen:** The anti- $\beta$ -2 microglobulin monoclonal antibody derives from human beta2-microglobulin;  
**Species reactivity:** Human;  
**Storage instruction:** store in the dark at 2-8 °C;  
**Storage buffer:** aqueous buffered solution containing protein stabilizer and 0.09% sodium azide (NaN<sub>3</sub>);  
**Recommended usage:** Immunostep's  $\beta$ -2 microglobulin, clone GRH1, is a monoclonal antibody intended for the identification and enumeration of B2M protein, a component of the class I major histocompatibility complex (MHC) involved in the presentation of peptide antigens to the immune system using flow cytometry. This reagent is effective for direct immunofluorescence staining of human tissue for flow cytometric analysis using 1 test for 10<sup>6</sup> cells;  
**Presentation:** liquid;  
**Source:** Supernatant proceeding from an in vitro cell culture of a cell hybridoma;  
**Purification:** Affinity chromatography;  
**Other names:**  $\beta$ 2M,  $\beta$ 2-M, beta2-microglobulin;  
**Gene ID:** 567;  
**Molecular weight:** 12 - 14 kDa.

## 2. ANTIGEN DETAILS

**Large description:** This antibody reacts with the beta2-microglobulin (B2M) associated with cell-surface MHC Class I molecules and other membrane antigens as well as with soluble B2-microglobulin.

In the immunoprecipitation test the GRH1 two bands were precipitated on SDS-PAGE analysis of 43 kDa and 12 kDa corresponding to the heavy chain of the HLA-A, B and C antigens encoded by a gene on chromosome 6, and the beta 2-microglobulin which is a non-glycosylated protein noncovalently bound to the heavy chain that is encoded by a gene on chromosome 15 (Entrez Gene (human): 15q21-q22.2).<sup>(1-6)</sup>

## 3. WARNINGS AND RECOMMENDATIONS

The high expression of b2 microglobulin in leukocytes produces high fluorescence intensity even with low brightness fluorochromes or non-saturating concentrations. This may overlap in other channels and hinders flow cytometer compensation. We recommended adding between 0.5 – 1 mg purified b2 microglobulin to avoid this matter (ref. beta2PU-OIMG).

## 4. WARRANTY

Warranted only to conform to the quantity and contents stated on the label or in the product labelling at the time of delivery to the customer. Immunostep disclaims hereby other warranties.

Immunostep's sole liability is limited to either the replacement of the products or refund of the purchase price.

## 5. ADDITIONAL INFORMATION

For research use only. This reagent has been manufactured and tested in compliance with ISO 13485:2016 Quality Manager System and with relevant Good Manufacturing Practices (GMP) guidelines.








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## 6. REFERENCES

- Cabrera T, Ruiz-Cabello F, Lopez MA, de la Higuera B, Sanchez M, Garrido F. Characterization of monoclonal antibodies directed against HLA class II molecules. Hybridoma 1986 Fall;5(3):191-7.
- Desoye G, Dohr GA, Motter W, Winter R, Urdl W, Pusch H, et al. Lack of HLA class I and class II antigens on human preimplantation embryos. J Immunol 1988 Jun 15;140(12):4157-9.
- Williams DB, Barber BH, Flavell RA, Allen H. Role of beta 2-microglobulin in the intracellular transport and surface expression of murine class I histocompatibility molecules. J Immunol 1989 Apr 15;142(8):2796-806.
- Danliczyk UG, Delovitch TL. Beta 2-microglobulin induces a conformational change in an MHC class I H chain that occurs intracellularly and is maintained at the cell surface. J Immunol 1994 Oct 15;153(8):3533-42.
- Snyder HL, Bacik I, Yewdell JW, Behrens TW, Bennink JR. Promiscuous liberation of MHC-class I-binding peptides from the C termini of membrane and soluble proteins in the secretory pathway. Eur J Immunol 1998 Apr;28(4):1339-46.
- Perez-Andres M, Almeida J, Martin-Ayuso M, De Las Heras N, Moro MJ, Martin-Nunez G, et al. Soluble and membrane levels of molecules involved in the interaction between clonal plasma cells and the immunological microenvironment in multiple myeloma and their association with the characteristics of the disease. Int J Cancer 2009 Jan 15;124(2):367-75

## 7. EXPLANATION OF SYMBOLS

	Form
	Catalog reference
	Contains sufficient for <n> test
	Quantity per test
	Regulatory Status
	Research Use Only
	Manufacturer

## 8. MANUFACTURED BY:



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