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www.rockland.com
tech@rockland.com
+1 484.791.3823

Datasheet for 200-301-GS6

# Hemoglobin beta F Antibody

## Overview

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| **Description:** | Anti-HbF (MOUSE) Monoclonal Antibody - 200-301-GS6 |
| **Item No.:** | 200-301-GS6 |
| **Size:** | 100 µg |
| **Applications:** | ELISA, WB, LFA |
| **Reactivity:** | Human |
| **Host Species:** | Mouse |

## Product Details

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| **Background:** | HbF antibodies detect the hemoglobin gamma isoform subunit. Functional alternate hemoglobin (Hb) is a hetero tetramer composed of 2 alpha and 2 gamma subunits (alpha-2 gamma-2). Hemoglobin F is elevated in newborns, reaching adult levels by 12 months. HbF levels are increased to as much as 5% to 10% in normal pregnancy. Sickle cell disease (SCD), thalassemias and hemoglobinopathies occur when aberrant forms of hemoglobin are expressed in children and adults. Hemoglobin variants arise from mutations in the globin genes and sickle cell disease and the more benign sickle cell trait are observed in more than 100 million people globally. HbF antibody does not react other forms of Hb. This antibody is ideal for investigators involved in Cardiovascular and developmental biology research. |
| **Synonyms:** | mouse anti-HbF antibody, mouse anti-hemoglobin antibody, Gamma-1-globin, Hb F Agamma, Hemoglobin gamma-1 chain, Hemoglobin gamma-A chain, HBG1, HBG2, HbF Antibody, Sickle Cell Disease (SCD) |
| **Host Species:** | Mouse |
| **Clonality:** | Monoclonal |
| **Clone ID:** | 4B3.B5.F3.B7 |
| **Format:** | IgG1 |

## Target Details

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| **Gene Name:** | HBG1 |
| **Reactivity:** | Human |

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| **Immunogen Type:** | Conjugated Peptide |
| **Immunogen:** | Anti-Hemoglobin beta F Monoclonal Antibody was produced in mice by repeated immunizations with synthetic peptide corresponding to amino acid residues near the N-terminus of Hb β-subunit conjugated to KLH. |
| **Purity/Specificity:** | This protein A purified mouse monoclonal antibody reacts specifically with human HbF gamma isoform. Anti-HbF is purified from tissue culture supernatant by protein A purification. Blast analysis shows 100% homology to Human, Pan troglodytes, Pan paniscus, Gorilla gorilla gorilla, Hylobates lar, Macaca nemestrina, Macaca mulatta, Pongo pygmaeus, Pongo pygmaeus, Macaca fuscata fuscata, and Papio cynocephalus. This antibody does not react with the HbA, HbS, HbC, or HbA-2 isoforms. |
| **Relevant Links:** | • UniProtKB - P69891<br>• NCBI - NP_000550.2<br>• GeneID - 3047 |

## Application Details

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| **Tested Applications:** | ELISA, WB |
| **Suggested Applications:** | LFA (Based on references) |
| **Application Note:** | Anti-Hemoglobin beta F (MOUSE) antibody has been tested ELISA and Western Blotting. This antibody is designed for use in lateral flow. Specific conditions of reactivity should be optimized by the end user. Expect a band of approximately 16 kDa. |
| **Assay Dilutions:** | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below. |
| **ELISA:** | 1:20,000 |
| **WB:** | 1ug/mL |

## Formulation

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| **Physical State:** | Liquid (sterile filtered) |
| **Concentration:** | 1.0mg/ml by UV absorbance at 280 nm |
| **Buffer:** | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| **Preservative:** | 0.01% (w/v) Sodium Azide |
| **Stabilizer:** | None |

## Shipping & Handling

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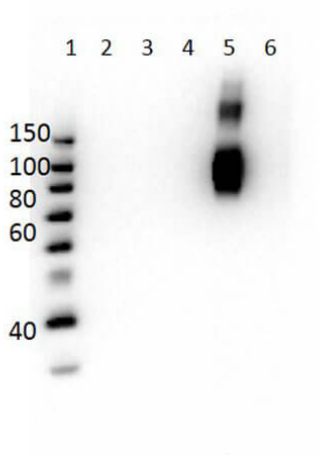
| **Shipping Condition:** | Dry Ice |
| **Storage Condition:** | Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use. |
| **Expiration:** | Expiration date is one (1) year from date of receipt. |

## Images




**Western Blot**
Western Blot of Mouse Anti-Hemoglobin beta F Antibody. Lane 1: Molecular Weight Ladder. Lane 2: HbA peptide conjugated to BSA. Lane 3: HbA-2 peptide conjugated to BSA. Lane 4: HbC peptide conjugated to BSA. Lane 5: HbF peptide conjugated to BSA. Lane 6: HbS peptide conjugated to BSA. Load: 50ng per lane. Primary antibody: Anti-HbF antibody at 1µg/mL overnight at 4°C. Secondary antibody: Rabbit Anti-Mouse secondary antibody at 1:40,000 for 30 min at RT. Block: MB-073 for 30 min RT. Predicted/Observed: Reactivity seen in Lane 5 specific to HbF only.

## Disclaimer