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

Datasheet for 200-301-GS7

Hemoglobin beta C Antibody

Overview

Description:	Anti-HbC (MOUSE) Monoclonal Antibody - 200-301-GS7
Item No.:	200-301-GS7
Size:	100 µg
Applications:	ELISA, WB, LFA
Reactivity:	Human
Host Species:	Mouse

Product Details

Background:	HbC antibodies detect the E6K mutant in the hemoglobin beta subunit. Functional hemoglobin (Hb) is a hetero tetramer composed of 2 alpha and 2 beta subunits (α2β2). Common isoform variants of hemoglobin include HbA, HbS, HbC, HbF, and HbA2. Sickle cell disease (SCD), thalassemias and hemoglobinopathies occur when aberrant forms of hemoglobin are expressed in children and adults. Globin gene mutations affect the structure and expression levels of Hb. Sickle cell disease and the more benign sickle cell trait are observed in more than 100 million people globally. Less significant than the SCD-E6V, HbC E6K mutation causes a mild hemolytic anemia. HbC antibody does not react to other forms of Hb. This antibody is ideal for investigators involved in Cardiovascular and developmental biology research.
Synonyms:	mouse anti-HbC antibody, mouse anti-hemoglobin antibody, Hemoglobin beta subunit C variant, HbBc, HbC, HbC Antibody, LVV-hemorphin-7, Spinorphin, Beta-globin, Hemoglobin beta chain, Sickle Cell Disease (SCD)
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	15C2.C11.F2.G11
Format:	IgG1

Target Details

Gene Name:	HBBc
Reactivity:	Human

Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Hemoglobin beta C 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 HbC beta c-variant isoform. Anti-HbC is purified from tissue culture supernatant by protein A purification. Blast analysis shows 100% homology to Human, Pan troglodytes, Pan paniscus, Gorilla gorilla gorilla, and Hylobates lar. This antibody does not react with the HbA, HbS, HbF, or HbA-2 isoforms.
Relevant Links:	• 200-301-GS7 SDS • UniProtKB - P68871

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	LFA (Based on references)
Application Note:	Anti-Hemoglobin beta C (MOUSE) antibody has been tested by 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

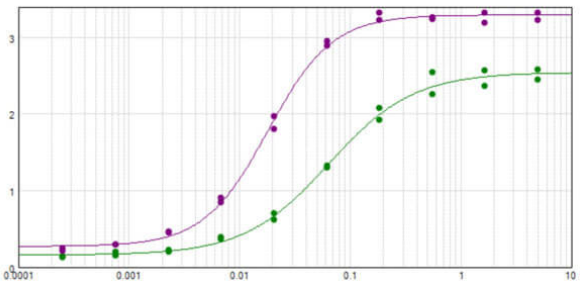
Physical State:	Liquid (sterile filtered)
Concentration:	1.00 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

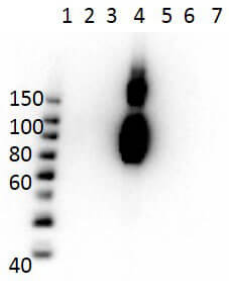
Shipping Condition:	Dry Ice

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



ELISA
ELISA results of purified Monoclonal anti-HbC antibody tested against BSA-conjugated peptide of HbC peptide. (Purple Line). Each well was coated in duplicate with 0.1µg of conjugate. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using Blocking buffer (p/n MB-060-1000), HRP conjugated (p/n 610-4302) and TMB substrate (p/n TMBM-1000). (also shown: results of polyclonal AP22732 - Green Line).



Western Blot
Western Blot of Mouse Anti-Hemoglobin beta C 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. Lane 7: BSA alone. Load: 50ng per lane. Primary antibody: Anti-HbC 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 4 specific to HbC only.

Disclaimer

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