

## Hemoglobin beta C antibody

Cat#: orb420240 (Datasheet)

### Overview

**Description:** Anti-HbC (MOUSE) Monoclonal Antibody

**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 ( $\alpha_2\beta_2$ ). 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

### Target Details

**Gene Name:** HBBc

**Reactivity:** Human

**Immunogen Type:** 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  $\beta$ -subunit conjugated to KLH.

**Purity/Specificity:** This protein A purified mouse monoclonal antibody reacts specifically with human HbC beta cvariant 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:** • UniProtKB - P68871

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### 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:** 1 $\mu$ g/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

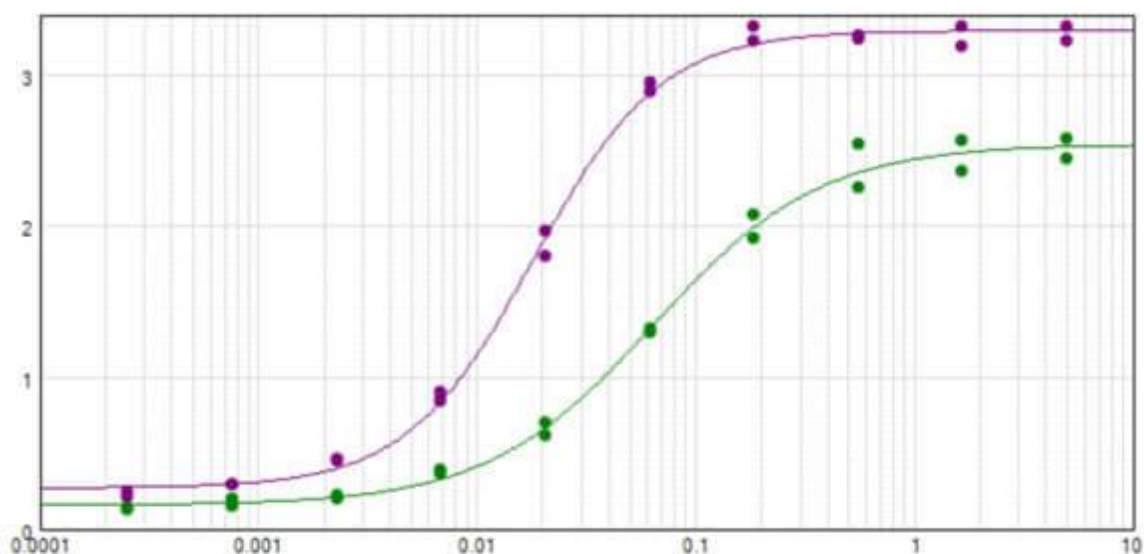
**Shipping Condition:** Dry Ice

**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

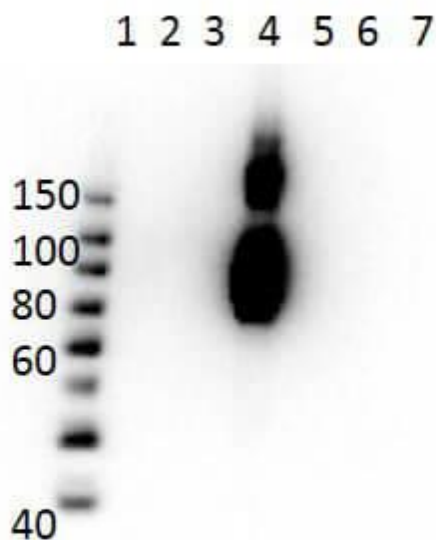
#### ELISA



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 0.1 $\mu$ g of conjugate. The starting dilution of antibody was 5 $\mu$ g/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, HRP conjugated and TMB substrate. (also shown: results of polyclonal - 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 1 $\mu$ g/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.