

## Product datasheet for **TA396792**

### **HBB Mouse Monoclonal Antibody [Clone ID: 23E5.H6.G6.C1.H7.F7.G9.F6]**

#### **Product data:**

<b>Product Type:</b>	Primary Antibodies
<b>Clone Name:</b>	23E5.H6.G6.C1.H7.F7.G9.F6
<b>Applications:</b>	ELISA, WB
<b>Recommended Dilution:</b>	<b>WB:</b> 1ug/mL
<b>Reactivity:</b>	Human
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG3, kappa
<b>Clonality:</b>	Monoclonal
<b>Immunogen:</b>	Anti-Hemoglobin beta S 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.
<b>Specificity:</b>	This protein A purified mouse monoclonal antibody reacts specifically with human HbS beta sickle isoform. Anti-HbS 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, HbF, HbC, or HbA-2 isoform.
<b>Formulation:</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Concentration:</b>	1.00 mg/ml - lot specific
<b>Conjugation:</b>	Unconjugated
<b>Storage:</b>	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 $\mu$ L). To minimize loss of volume dilute 1:10 by adding 225 $\mu$ L of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
<b>Stability:</b>	Expiration date is one (1) year from date of receipt.
<b>Database Link:</b>	<a href="#">P68871</a>



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**Background:**

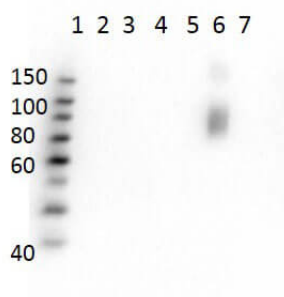
HbS antibodies detect the E6V mutant in the hemoglobin beta subunit. Functional adult hemoglobin (Hb) is a hetero tetramer composed of 2 alpha and 2 beta subunits ( $\alpha_2\beta_2$ ). Common isoform variants of hemoglobin include HbA, HbS, HbC, HbF, and HbA2. Hemoglobin S is the predominant hemoglobin in people with sickle cell disease. The alpha chain is normal. The disease-producing mutation exists in the beta chain, giving the molecule the structure,  $\alpha_2\beta_2^S$ . People who have one sickle mutant gene and one normal beta gene have sickle cell trait which is benign. 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. Perhaps the most significant mutation is the E6V in the beta subunit and the cause of SCD, but other relevant isoforms of Hb are observed. HbS 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-HbS antibody, mouse anti-hemoglobin antibody, Hemoglobin beta subunit sickle mutant, HBS, HBSs, HbS Antibody, Sickle Cell Disease (SCD)

**Note:**

Anti-Hemoglobin beta S (MOUSE) antibody has been tested by ELISA and western blot. 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 in appropriate lysates.

**Product images:**

Western Blot of Mouse Anti-Hemoglobin beta S 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-HbS 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 6 specific to HbS only.