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Anti-HbS (MOUSE) Monoclonal Antibody
Hemoglobin beta S Antibody
Catalog # ASR4240

Specification

Anti-HbS (MOUSE) Monoclonal Antibody - Product Information

Host	**Mouse**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Monoclonal**
Application	**WB, E, I, LCI**
Application 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.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**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 β-subunit conjugated to KLH.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-HbS (MOUSE) Monoclonal Antibody - Additional Information

Gene ID 3043

Purity
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.

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.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-HbS (MOUSE) Monoclonal Antibody - Protein Information

Name HBB

Function
Involved in oxygen transport from the lung to the various peripheral tissues. [Spinorphin]: Functions as an endogenous inhibitor of enkephalin-degrading enzymes such as DPP3, and as a selective antagonist of the P2RX3 receptor which is involved in pain signaling, these properties implicate it as a regulator of pain and inflammation.

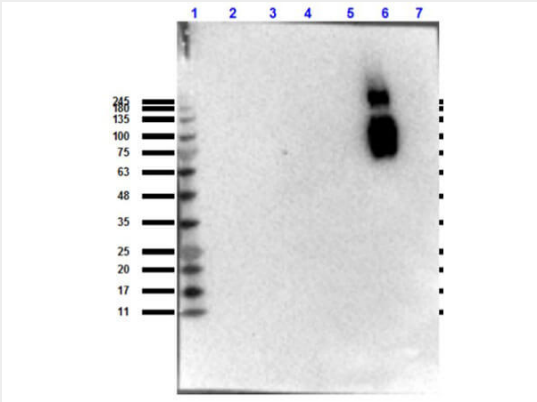
Tissue Location
Red blood cells..

Anti-HbS (MOUSE) Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-HbS (MOUSE) Monoclonal Antibody - Images



Western blot results of Mouse Anti-HbS Antibody. Lane 1: Opal Prestained molecular weight ladder - MB-210-0500. Lane 2: HbA. Lane 3: HbA2. Lane 4: HbC. Lane 5: HbF. Lane 6: HbS. Lane 7: BSA. Loaded 10ug. Blocking: BlockOut Universal buffer - MB-073 for 30 min at RT. Primary Antibody: Anti-Hemoglobin beta S at 1:1000 overnight at 4°C. Secondary Antibody: Rabbit Anti-Mouse HRP - 610-403-C46 at 1:40,000 for 30 min at RT.

Anti-HbS (MOUSE) Monoclonal Antibody - 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 (α2β2). 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, α2βS2. 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.