

Datasheet for 200-301-GS8S**Hemoglobin beta A-2 Antibody****Overview**

Description:	Anti-HbA-2 (MOUSE) Monoclonal Antibody - 200-301-GS8S
Item No.:	200-301-GS8S
Size:	25 µL
Applications:	ELISA, WB, LFA
Reactivity:	Human
Host Species:	Mouse

Product Details

Background:	HbA-2 or hemoglobin delta subunit antibodies detect the delta-specific sequence in the hemoglobin delta-subunit found in HbA-2. Functional hemoglobin (Hb) is a hetero tetramer and the dominant form of Adult Hb is composed of 2 alpha and 2 beta subunits ($\alpha_2\beta_2$). Hemoglobin A-2 (HbA-2) is a normal but minor variant of hemoglobin A that consists of two alpha and two delta chains ($\alpha_2\delta_2$). Hemoglobin A-2 may be increased in beta thalassemia or in people who are heterozygous for the beta thalassemia gene, and HbA2 is also linked to neurological disorders. HbA-2 form exists in small amounts in all adult humans (1.5-3.1% of all hemoglobin molecules) and is increased in people with Sickle-cell disease. Its normal biological role is not well understood. HbA-2 antibody does not react other forms of Hb including no cross-reaction to HbA or beta subunit. This antibody is ideal for investigators involved in Cardiovascular and developmental biology research.
Synonyms:	mouse anti-HbA-2 antibody, mouse anti-hemoglobin antibody, Hemoglobin Subunit Delta, Hemoglobin Delta Chain 4, Delta-Globin 4, HbD, HbA-2 Antibody, Sickle Cell Disease (SCD)
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	21G1.F1.B9.G9.D11
Format:	IgG1

Target Details

Gene Name:	HBD
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Reactivity:	Human
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-Hemoglobin beta A-2 Monoclonal Antibody was produced in mice by repeated immunizations with synthetic peptide corresponding to amino acid residues near the N-terminus of Hb δ -subunit conjugated to KLH.
Purity/Specificity:	This protein A purified mouse monoclonal antibody reacts specifically with human HbA-2 delta isoform. Anti-HbA-2 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, HbC, or HbF isoforms.
Relevant Links:	• UniProtKB - P02042 • NCBI - NP_000510.1 • GeneID - 3045

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	LFA (Based on references)
Application Note:	Anti-Hemoglobin beta A-2 (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

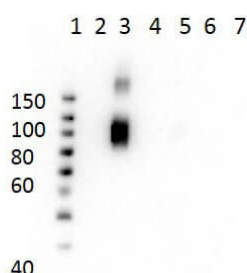
Formulation

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 or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL 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.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western Blot of Mouse Anti-Hemoglobin beta A-2 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-HbA-2 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 3 specific to HbA-2 only.

References

- Koivunen E et al. Hypoxia favors tumor growth in colorectal cancer in an integrin $\alpha\text{D}\beta 1$ /hemoglobin δ -dependent manner. *Life Sci Alliance*. (2024)

Disclaimer

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