

Datasheet for 200-301-GS8**Hemoglobin beta A-2 Antibody****Overview**

Description:	Anti-HbA-2 (MOUSE) Monoclonal Antibody - 200-301-GS8
Item No.:	200-301-GS8
Size:	100 µg
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

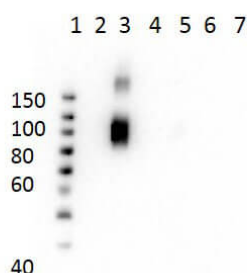
Formulation

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 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



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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