# Anti-CD235a IgG1 Antibody, Biotin-Labeled

Catalog: 101098
Lot: 240321

## Product Information

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| **Description:** | Anti-CD235a antibody is a purified biotinylated recombinant human antibody which recognizes the human CD235a/GYPA protein. The heavy chain contains a C-terminal Avi-Tag™. This antibody has been tested for specific binding to purified human CD235a protein (BPS Bioscience #101196) in a colorimetric ELISA. |
| **Background:** | CD235a, also known as Glycophorin A (GYPA), is a sialoglycoprotein and a major intrinsic membrane protein on the surface of human erythrocytes. CD235a plays an important role in the prevention of red cell aggregation in the circulatory system. The Glycophorin A gene contains some antigenic alleles of the MNS blood grouping system for which 40 known variants exist. Several of these antigenic variants have implications for pathogen interaction. For example, the Wright b antigen in the helical region of Glycophorin A acts as a receptor for the malaria parasite *Plasmodium falciparum*. Other variations such as the Mur phenotype cause hemolytic transfusion reaction (HTR) and hemolytic disease in the newborn fetus (HDFN). CD235a is one of the most abundant integral proteins of the red cell membrane, and its genetic sequence varies within a population; therefore, it may also support applications in forensic science. |
| **Species:** | Human |
| **Concentration:** | 1.76 mg/ml |
| **Expression System:** | HEK293 |
| **Purity:** | ≥90% |
| **Format:** | Aqueous buffer solution. |
| **Formulated In:** | 8 mM phosphate, pH 7.4, 110 mM NaCl, 2.2 mM KCl, and 20% glycerol |
| **MW:** | Heavy Chain: 51 kDa + glycans; Light Chain: 23 kDa |
| **Glycosylation:** | This antibody runs at a higher MW by SDS-PAGE due to glycosylation. |
| **Label:** | This antibody is enzymatically biotinylated using Avi-Tag™ technology. Biotinylation is confirmed to be ≥90%. |
| **Stability:** | At least 12 months at -80°C. |
| **Storage:** | -80°C |
| **Instructions for Use:** | Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles. |
| **Assay Conditions:** | Experimental design and assay protocol for measuring anti-CD235a specific binding to CD235a antigen in ELISA assay: |

1. Purified human CD235a protein (BPS Bioscience #101196) was coated onto a clear 96-well nickel plate overnight at 4°C (1 µg/ml in PBS, 50 µl per well).
2. The next day, the wells were washed three times with 100 µl of Immuno Buffer 1 (BPS Bioscience #79311). The plate was tapped upside down on paper towels to remove excess buffer.
3. The wells were blocked with 100 µl of Blocking Buffer 2 (BPS Bioscience #79728) per well for 1 hour at room temperature with slow shaking.
4. Serial dilutions of anti-CD235a diluted in Blocking Buffer 2 were incubated in each well for 1 hour at room temperature (with slow shaking). (suggested range: 300 nM to 0 nM in replicates)
5. Wells were washed as in step 2 and incubated with Streptavidin-HRP for 1 hour at room temperature (with slow shaking), then washed again.
6. For detection, the wells were incubated with 50 µl of HRP Colorimetric Substrate (BPS Bioscience #79651) for 1-10 minutes until a blue color developed in the positive control.
7. The reaction was then immediately quenched with an equal volume of 1N HCl and absorbance was measured at 450 nm.

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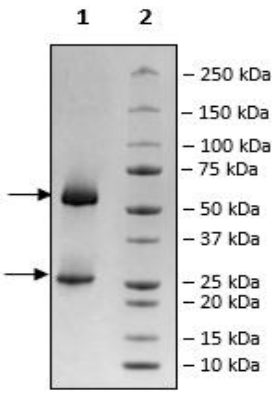
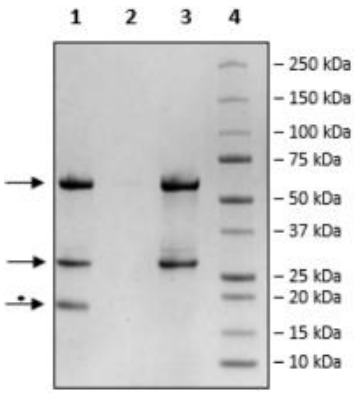
**Applications:** Useful for the study of the binding of CD235a in ELISA based assays.

## Quality Control Data

4-20% SDS-PAGE Coomassie Staining




Biotin-Avidin Pulldown




1. Beads
2. Flow Thru
3. Control
4. Standards

* Avidin from beads.

CD235a Activity