abcam

Product datasheet

# Anti-Hemoglobin antibody [Haem1] ab401

## 2 References

### Overview

| | |
|---|---|
| **Product name** | Anti-Hemoglobin antibody [Haem1] |
| **Description** | Mouse monoclonal [Haem1] to Hemoglobin |
| **Host species** | Mouse |
| **Specificity** | hHb - 100% hAlbumin - <0.01% hHaptoglobin - 0.4% hMyoglobin - <0.03% hTransferrin - <0.01% Cross-reactivity values have been calculated on weight/weight basis. They can vary because of the presence of antigen or related impurities in protein preparations used for cross reactivity assays. Affinity constant: $1x10^{10}$ l/mol human haemoglobin. |
| **Tested applications** | **Suitable for:** ELISA, RIA |
| **Species reactivity** | **Reacts with:** Human |
| **Immunogen** | Full length native protein (purified) (Human). |
| **General notes** | The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

### Properties

| | |
|---|---|
| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | pH: 6.00<br>Preservative: 0.095% Sodium azide<br>Constituents: 0.335% PBS, 1.0878% Sodium citrate |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | Haem1 |
| **Myeloma** | unknown |

| | |
|---|---|
| **Isotype** | IgG1 |
| **Light chain type** | unknown |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab401 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **ELISA** | | Use at an assay dependent concentration. |
| **RIA** | | Use at an assay dependent concentration. |

## Target

**Function** Involved in oxygen transport from the lung to the various peripheral tissues.

**Tissue specificity** Red blood cells.

**Involvement in disease** Defects in HBA1/HBA2 may be a cause of Heinz body anemias (HEIBAN) [MIM:140700]. This is a form of non-spherocytic hemolytic anemia of Dacie type 1. After splenectomy, which has little benefit, basophilic inclusions called Heinz bodies are demonstrable in the erythrocytes. Before splenectomy, diffuse or punctate basophilia may be evident. Most of these cases are probably instances of hemoglobinopathy. The hemoglobin demonstrates heat lability. Heinz bodies are observed also with the Ivemark syndrome (asplenia with cardiovascular anomalies) and with glutathione peroxidase deficiency.
Defects in HBA1/HBA2 are the cause of alpha-thalassemia (A-THAL) [MIM:604131]. The thalassemias are the most common monogenic diseases and occur mostly in Mediterranean and Southeast Asian populations. The hallmark of alpha-thalassemia is an imbalance in globin-chain production in the adult HbA molecule. The level of alpha chain production can range from none to very nearly normal levels. Deletion of both copies of each of the two alpha-globin genes causes alpha(0)-thalassemia, also known as homozygous alpha thalassemia. Due to the complete absence of alpha chains, the predominant fetal hemoglobin is a tetramer of gamma-chains (Bart hemoglobin) that has essentially no oxygen carrying capacity. This causes oxygen starvation in the fetal tissues leading to prenatal lethality or early neonatal death. The loss of three alpha genes results in high levels of a tetramer of four beta chains (hemoglobin H), causing a severe and life-threatening anemia known as hemoglobin H disease. Untreated, most patients die in childhood or early adolescence. The loss of two alpha genes results in mild alpha-thalassemia, also known as heterozygous alpha-thalassemia. Affected individuals have small red cells and a mild anemia (microcytosis). If three of the four alpha-globin genes are functional, individuals are completely asymptomatic. Some rare forms of alpha-thalassemia are due to point mutations (non-deletional alpha-thalassemia). The thalassemic phenotype is due to unstable globin alpha chains that are rapidly catabolized prior to formation of the alpha-beta heterotetramers.
Note=Alpha(0)-thalassemia is associated with non-immune hydrops fetalis, a generalized edema of the fetus with fluid accumulation in the body cavities due to non-immune causes. Non-immune hydrops fetalis is not a diagnosis in itself but a symptom, a feature of many genetic disorders, and the end-stage of a wide variety of disorders.

**Sequence similarities** Belongs to the globin family.

| | |
|---|---|
| **Post-translational modifications** | The initiator Met is not cleaved in variant Thionville and is acetylated. |

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

## Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

## Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors