**BACKGROUND**

Hemoglobin (Hgb) is coupled to four iron-binding, methene-linked tetrapyrrole rings (heme). The α (16p13.3; 5'-ζ-pseudoc-ζ-pseudoc-2-pseudo ζ1-α2-ζ1-01-3) and β (11p15.5) globin loci determine the basic Hgb structure. The globin portion of Hemoglobin consists of two α chains and two β chains arranged in pairs forming a tetramer. Each of the four globin chains covalently associates with a heme group. The bonds between α and β chains are weaker than between similar globin chains, thereby forming a cleavage plane that is important for oxygen binding and release. High affinity for oxygen occurs upon relaxation of the α1-β2 cleavage plane. When the two α1-β2 interfaces are closely bound, Hemoglobin has a low affinity for oxygen. Hb A, which contains two α chains plus two β chains, comprises 97% of total circulating hemoglobin. The remaining 3% of total circulating hemoglobin is comprised of Hb A-2, which consists of 2 α chains plus 2 δ chains, and fetal hemoglobin (Hb F), which consists of 2 α chains together with 2 γ chains.

**CHROMOSOMAL LOCATION**

Genetic locus: HBG2/HBG1 (human) mapping to 11p15.4.

**SOURCE**

Hemoglobin γ (51-7) is a mouse monoclonal antibody raised against human hemoglobin.

**PRODUCT**

Each vial contains 200 μg IgG, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Hemoglobin γ (51-7) is available conjugated to agarose (sc-21756 AC), Alexa Fluor® 488 (sc-21756 AF488), Alexa Fluor® 546 (sc-21756 AF546), Alexa Fluor® 594 (sc-21756 AF594) or Alexa Fluor® 647 (sc-21756 AF647), 200 μg/ml, for WB (RGB), IF, IHC (P) and FCM; and to either Alexa Fluor® 594 (sc-21756 AF594), Alexa Fluor® 647 (sc-21756 AF647), 200 μg/ml, for WB (RGB), IF, IHC and FCM; and to either Alexa Fluor® 488 (sc-21756 AF488) or Alexa Fluor® 790 (sc-21756 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Hemoglobin γ (51-7) is recommended for detection of Hemoglobin γ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μg per 1 x 10^6 cells).

Suitable for use as control antibody for Hemoglobin γ siRNA (h): sc-37108, Hemoglobin γ shRNA Plasmid (h): sc-37108-SH and Hemoglobin γ shRNA (h) Lentiviral Particles: sc-37108-V.

Molecular Weight of Hemoglobin γ: 18 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270 or TF-1 cell lysate: sc-2412.

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

- Hemoglobin γ (51-7) sc-21756. Western blot analysis of Hemoglobin γ expression in HEL 92.1.7 (A) and TF-1 (B) whole cell lysates.

- Hemoglobin γ (51-7) sc-21756. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic staining of macrophages at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.