

Hemoglobin α (V-13): sc-31109

BACKGROUND

Hemoglobin (Hgb) is a 66.7 kDa protein coupled to four iron-binding, methene-linked tetrapyrrole rings (heme). The α (16p13.3; 5'- ζ -pseudo ζ -pseudo α 2-pseudo α 1- α 2- α 1- θ 1-3') and β (11p15.5) globin loci determine the basic Hgb structure. The globin portion of Hgb 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 α 1- β 2 cleavage plane. When the two α 1- β 2 interfaces are closely bound, Hgb has a low affinity for oxygen. 97% of total circulating hemoglobin contains two α chains plus two β chains (Hb A). Two γ chains together with two α chains constitute fetal hemoglobin (Hb F). Two α chains plus two δ chains constitute adult hemoglobin (Hb A-2). Hb F and Hb A-2 together comprise the remaining 3% of adult hemoglobin.

CHROMOSOMAL LOCATION

Genetic locus: HBA1 (human) mapping to 16p13.3; Hba1 (mouse) mapping to 11 A4.

SOURCE

Hemoglobin α (V-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Hemoglobin α of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31109 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Hemoglobin α (V-13) is recommended for detection of Hemoglobin α of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Hemoglobin α (V-13) is also recommended for detection of Hemoglobin α in additional species, including equine.

Suitable for use as control antibody for Hemoglobin α siRNA (h): sc-41230, Hemoglobin α siRNA (m): sc-41231, Hemoglobin α shRNA Plasmid (h): sc-41230-SH, Hemoglobin α shRNA Plasmid (m): sc-41231-SH, Hemoglobin α shRNA (h) Lentiviral Particles: sc-41230-V and Hemoglobin α shRNA (m) Lentiviral Particles: sc-41231-V.

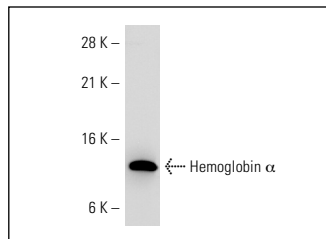
Molecular Weight of Hemoglobin α : 10 kDa.

Positive Controls: TF-1 cell lysate: sc-2412, Hel 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

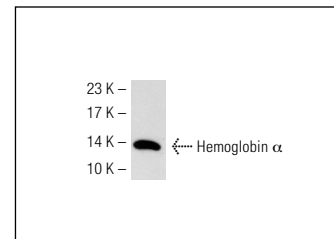
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Hemoglobin α (V-13): sc-31109. Western blot analysis of Hemoglobin α expression in HEL 92.1.7 whole cell lysate.



Hemoglobin α (V-13): sc-31109. Western blot analysis of Hemoglobin α expression in K-562 whole cell lysate.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Hemoglobin α (D-4): sc-514378** or **Hemoglobin α (B-10): sc-514851**, our highly recommended monoclonal alternatives to Hemoglobin α (V-13). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Hemoglobin α (D-4): sc-514378**.