

Hemoglobin γ (B-4): sc-377395

BACKGROUND

Hemoglobin (Hgb) is 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. 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 two α chains plus two δ chains, and fetal hemoglobin (Hb F), which consists of two α chains together two γ chains.

REFERENCES

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- Giardina, B., et al. 1995. The multiple functions of hemoglobin. *Crit. Rev. Biochem. Mol. Biol.* 30: 165-196.
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- Baudin-Creuz, V., et al. 2004. Transfer of human α - to β -hemoglobin via its chaperone protein: evidence for a new state. *J. Biol. Chem.* 279: 36530-36533.

CHROMOSOMAL LOCATION

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

SOURCE

Hemoglobin γ (B-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 9-43 near the N-terminus of Hemoglobin γ of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG₃ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377395 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

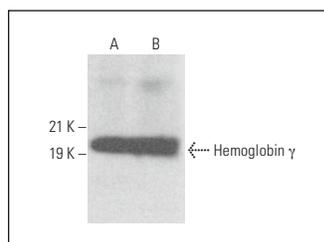
Hemoglobin γ (B-4) is recommended for detection of Hemoglobin γ of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

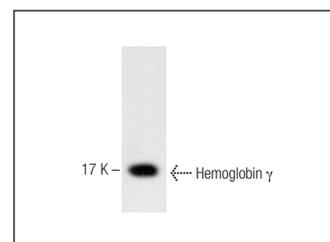
Molecular Weight of Hemoglobin γ : 18 kDa.

Positive Controls: human placenta extract: sc-363772, HEL 92.1.7 cell lysate: sc-2270 or TF-1 cell lysate: sc-2412.

DATA



Hemoglobin γ (B-4): sc-377395. Western blot analysis of Hemoglobin γ expression in human placenta (A) and human fetal heart (B) tissue extracts.



Hemoglobin γ (B-4): sc-377395. Western blot analysis of Hemoglobin γ expression in HEL 92.1.7 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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



See **Hemoglobin $\beta/\gamma/\delta/\epsilon$ (A-8): sc-390668** for Hemoglobin $\beta/\gamma/\delta/\epsilon$ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.