

Hemoglobin β (18): sc-130320

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 2 α chains plus 2 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 α chains, and fetal hemoglobin (Hb F), which consists of 2 α chains together 2 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.
- Adachi, K., et al. 2002. Assembly of human hemoglobin (Hb) β - and γ -globin chains expressed in a cell-free system with α -globin chains to form Hb A and Hb F. *J. Biol. Chem.* 277: 13415-13420.
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CHROMOSOMAL LOCATION

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

SOURCE

Hemoglobin β (18) is a mouse monoclonal antibody raised against recombinant Hemoglobin β of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Hemoglobin β (18) is recommended for detection of Hemoglobin β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunohistochemistry (including paraffin-embedded sections) (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 β siRNA (h): sc-35558, Hemoglobin β shRNA Plasmid (h): sc-35558-SH and Hemoglobin β shRNA (h) Lentiviral Particles: sc-35558-V.

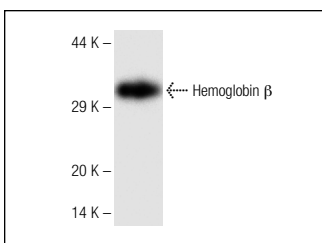
Molecular Weight of Hemoglobin β : 16 kDa.

Positive Controls: TF-1 cell lysate: sc-2412.

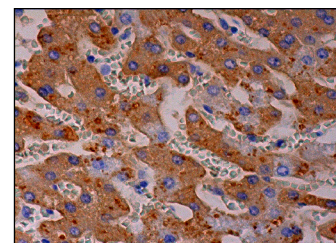
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Hemoglobin β (18): sc-130320. Western blot analysis of human recombinant Hemoglobin β .



Hemoglobin β (18): sc-130320. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

STORAGE

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

PROTOCOLS

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