

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Hemoglobin ζ in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 778633
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Hemoglobin ζ Met1-Arg142 Accession # P02008
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

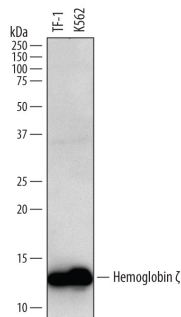
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.2 μg/mL	See Below
Immunocytochemistry	8-25 μg/mL	See Below

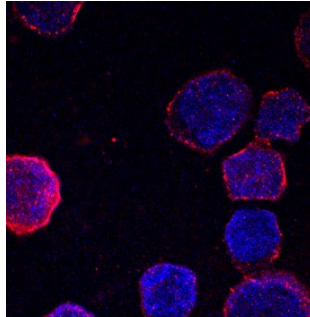
DATA

Western Blot



Detection of Human Hemoglobin ζ by Western Blot.
Western blot shows lysates of TF-1 human erythroleukemic cell line and K562 human chronic myelogenous leukemia cell line. PVDF membrane was probed with 0.2 μg/mL of Mouse Anti-Human Hemoglobin ζ Monoclonal Antibody (Catalog # MAB7708) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Hemoglobin ζ at approximately 13 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Hemoglobin ζ in K562 Human Cell Line.
Hemoglobin ζ was detected in immersion fixed K562 human chronic myelogenous leukemia cell line using Mouse Anti-Human Hemoglobin ζ Monoclonal Antibody (Catalog # MAB7708) at 10 μg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Hemoglobin is a tetrameric heme-containing protein that is responsible for the transport of oxygen by red blood cells in the circulation. For most of fetal development and adulthood, hemoglobin consists of two alpha chains and two beta chains. Hemoglobin zeta (HBZ) is an approximately 15 kDa alpha chain-like protein that is produced during the first few weeks of embryogenesis until the onset of alpha chain expression. Its expression is prolonged in α0-thalassemia which is characterized by deficient alpha chain production. The Gower-1, Portland-1, and Portland-2 forms of hemoglobin consist of two zeta chains in association with either two epsilon, gamma, or beta chains, respectively. Human Hemoglobin zeta shares 79% amino acid sequence identity with mouse and rat Hemoglobin zeta.