

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                       |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human Hemoglobin ζ in direct ELISAs.                                                |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>2B</sub> Clone # 778633                                           |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                  |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human Hemoglobin ζ<br>Met1-Arg142<br>Accession # P02008 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 nm             |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                             |

#### 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.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### 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 α<sup>0</sup>-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.

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