

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                              |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human SHB in direct ELISAs.                                                |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                          |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human SHB<br>Ala2-Phe128<br>Accession # Q15464 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 405<br>Excitation Wavelength: 405 nm<br>Emission Wavelength: 421 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.

**Immunohistochemistry** 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

SHB (SH2 homology protein in B/β-cells) is a 55-59 kDa cytoplasmic adaptor protein that serves as a link between phosphotyrosine residues and downstream signaling pathways. SHB is ubiquitously expressed, and binds tyrosine kinase receptors such as FGFR1, VEGFR2, and the TCR (ζ-chain) following their activation. It is highly modular, and through a variety of motifs, is able to bind multiple, structurally unrelated proteins that collectively generate a signal transduction network. Human SHB is 509 amino acids (aa) in length. It contains an N-terminal Pro-rich region that binds SH3 domain-containing proteins (aa 19-45), a central PTB domain that binds select aa motifs, and a C-terminal SH2 domain that interacts with phosphotyrosines (aa 410-504). There are at least nine utilized phosphorylation sites. There are two isoform variants. One is 66-68 kDa in size, and possesses an 87 aa Pro-rich N-terminal extension. This MW may increase to 77-80 kDa following posttranslational processing. A second variant shows an 18 aa substitution for aa 280-509. Over aa 2-128, human SHB shares 91% aa identity with mouse SHB.

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