

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human/Mouse/Rat                                                                                     |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human, mouse, and rat Parvalbumin $\alpha$ in direct ELISAs and Western blots.              |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                                |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                           |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human Parvalbumin $\alpha$<br>Ser2-Ser110<br>Accession # P20472 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 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>Immunohistochemistry</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

Parvalbumin (Parvalbumin  $\alpha$ ) is a 12 kDa member of the parvalbumin family of  $\text{Ca}^{++}$ -binding proteins. In human, it is expressed in intrafusal muscle fibers, plus GABAergic interneurons and cerebellar Purkinje and basket cells. It presumably acts as a  $\text{Ca}^{++}$  buffer that shortens the duration of fiber contraction. Human Parvalbumin is 110 amino acids (aa) in length. It contains two EF-hand domains (aa 39-74 and 78-110) that bind calcium. There are three potential isoform variants. One shows an alternate start site at Met33, a second shows a six aa substitution for the C-terminal nine amino acids and a third shows a deletion of Gly99-Val100. Human Parvalbumin  $\alpha$  is 51% aa identical to human Parvalbumin  $\beta$  and is 87% plus 92% aa identical to mouse and rat Parvalbumin, respectively.

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