

DESCRIPTION

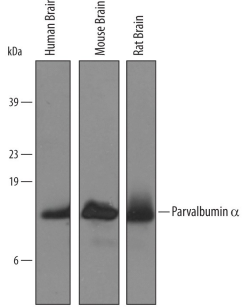
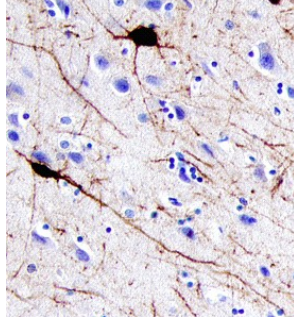
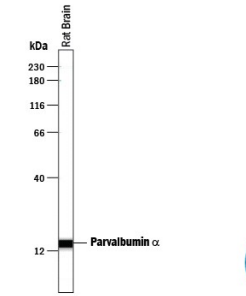

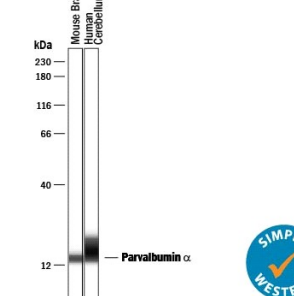

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat Parvalbumin α in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human Parvalbumin α Ser2-Ser110 Accession # P20472
Formulation	Lyophilized from a 0.2 μ m 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 μ m 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	1 μ g/mL	See Below
Immunohistochemistry	5-15 μ g/mL	See Below
Simple Western	50 μ g/mL	See Below

DATA

<p>Western Blot</p>  <p>Detection of Human/Mouse/Rat Parvalbumin α by Western Blot. Western blot shows lysates of human, mouse, and rat brain tissue. PVDF membrane was probed with 1 μg/mL of Sheep Anti-Human/Mouse/Rat Parvalbumin α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5058) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Parvalbumin α at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p>	<p>Immunohistochemistry</p>  <p>Parvalbumin α in Human Brain. Parvalbumin α was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using 5 μg/mL Sheep Anti-Human/Mouse/Rat Parvalbumin α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5058) overnight at 4 $^{\circ}$C. Tissue was stained with the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
<p>Simple Western</p>  <p>Detection of Rat Parvalbumin α by Simple Western™. Simple Western lane view shows lysates of rat brain tissue, loaded at 0.2 mg/mL. A specific band was detected for Parvalbumin α at approximately 15 kDa (as indicated) using 50 μg/mL of Sheep Anti-Human/Mouse/Rat Parvalbumin α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5058) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p> 	<p>Simple Western</p>  <p>Detection of Human and Mouse Parvalbumin α by Simple Western™. Simple Western lane view shows lysates of mouse brain (cortex) and human brain (cerebellum), loaded at 0.2 mg/mL. A specific band was detected for Parvalbumin α at approximately 14 and 17 kDa (as indicated) using 50 μg/mL of Sheep Anti-Human/Mouse/Rat Parvalbumin α Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5058) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.</p> 

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
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 $^{\circ}$ C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 $^{\circ}$C as supplied. 1 month, 2 to 8 $^{\circ}$C under sterile conditions after reconstitution. 6 months, -20 to -70 $^{\circ}$C under sterile conditions after reconstitution.

BACKGROUND

Parvalbumin (Parvalbumin α) is a 12 kDa member of the parvalbumin family of 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 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 α is 51% aa identical to human Parvalbumin β and is 87% plus 92% aa identical to mouse and rat Parvalbumin, respectively.