

# parvalbumin $\alpha$ (H-70): sc-25727

## BACKGROUND

The family of EF-hand type  $Ca^{2+}$ -binding proteins includes calbindin (previously designated vitamin D-dependent  $Ca^{2+}$ -binding protein), S-100 $\alpha$  and  $\beta$ , calgranulins A (also designated MRP8), B (also designated MRP14) and C (S-100 like proteins) and the parvalbumin family members, including parvalbumin  $\alpha$  and parvalbumin  $\beta$ , also designated oncomodulin (OCM). Structurally and evolutionarily conserved, parvalbumin  $\alpha$  and OCM proteins are distinct in expression and function. Parvalbumin  $\alpha$ , also designated parvalbumin (PV), is most abundantly expressed in fast-contracting muscles with lower expression levels in brain and some endocrine tissues, including kidney and parathyroid. Research indicates that parvalbumin  $\alpha$  plays a significant role in muscle relaxation. OCM was originally thought to have expression restricted to neoplastic tissues, early embryonic cells and certain tumor cell lines. Recent research shows that OCM is also expressed and secreted by macrophages where, in the retina it binds to retinal ganglion cells (RGCs) and functions to promote axon regeneration. OCM has also been detected in the auditory sensory cells of the organ of Corti in mammals. In humans, two different loci on chromosome 7 have been identified as OCM and OCM-like (LOC4951). These genes encode proteins 109 amino acids in length which share 99% sequence identity.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: PVALB (human) mapping to 22q12.3; Pvalb (mouse) mapping to 15 E1.

## SOURCE

parvalbumin  $\alpha$  (H-70) is a rabbit polyclonal antibody raised against amino acids 21-90 of parvalbumin  $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

parvalbumin  $\alpha$  (H-70) is recommended for detection of parvalbumin  $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

parvalbumin  $\alpha$  (H-70) is also recommended for detection of parvalbumin  $\alpha$  in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for parvalbumin  $\alpha$  siRNA (h): sc-43350, parvalbumin  $\alpha$  siRNA (m): sc-43351, parvalbumin  $\alpha$  shRNA Plasmid (h): sc-43350-SH, parvalbumin  $\alpha$  shRNA Plasmid (m): sc-43351-SH, parvalbumin  $\alpha$  shRNA (h) Lentiviral Particles: sc-43350-V and parvalbumin  $\alpha$  shRNA (m) Lentiviral Particles: sc-43351-V.

Molecular Weight of parvalbumin  $\alpha$ : 12 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.