**bs-4902R** **[ Primary Antibody ]**

# Calponin 1 + 2 + 3 Rabbit pAb

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## DATASHEET

**Host:** Rabbit **Isotype:** IgG

**Clonality:** Polyclonal

**GeneID:** 1265 **SWISS:** Q99439

**Target:** Calponin 1 + 2 + 3

**Immunogen:** KLH conjugated synthetic peptide derived from human Calponin 1/2/3: 101-200/309.

**Purification:** affinity purified by Protein A

**Concentration:** 1mg/ml

**Storage:** 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

**Background:** Calponin regulates smooth muscle cell contraction and is a marker of smooth muscle cell differentiation. Calponin, an Actin- and Tropomyosin-binding protein, is characterized as an inhibitory factor of smooth-muscle actomyosin activity. Calponin is implicated in the regulation of smooth muscle contraction through its interaction with F-Actin and inhibition of the Actin-activated MgATPase activity of phosphorylated myosin. Both properties are lost following phosphorylation (primarily at Serine 175) by protein kinase C or calmodulin-dependent protein kinase II. The three forms of Calponin, Calponin 1 (basic Calponin), Calponin 2 (neutral Calponin) and Calponin 3 (acidic Calponin) are found in smooth muscle tissue. Additionally, Calponin 2 is found in heart muscle tissue and Calponin 3 is found in the brain.

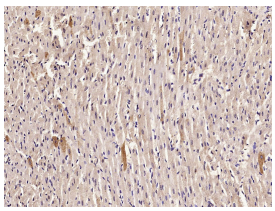
**Applications:** **IHC-P** (1:100-500)
**IHC-F** (1:100-500)
**IF** (1:50-200)
**Flow-Cyt** (1μg/Test)

**Reactivity:** Rat (predicted: Human, Mouse, Pig, Cow, Dog, Horse)

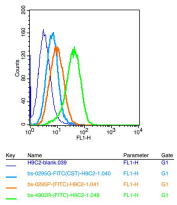
**Predicted MW.:** 34 kDa

**Subcellular Location:** Secreted ,Extracellular matrix ,Cell membrane ,Cytoplasm

## VALIDATION IMAGES



Paraformaldehyde-fixed, paraffin embedded (Rat heart); Antigen retrieval by microwave in sodium citrate buffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3% BSA) at RT for 30min; Antibody incubation with (Calponin 1 + 2 + 3) Polyclonal Antibody, Unconjugated (bs-4902R) at 1:400 overnight at 4°C, followed by conjugation to the secondary antibody (labeled with HRP)and DAB staining.



Positive control: H9C2(2% Paraformaldehyde-fixed ) Isotype Control Antibody: Rabbit IgG; Dilution: 1μg in 100 μl 1 X PBS containing 0.5% BSA Secondary Antibody: Goat anti-rabbit IgG-FITC; Dilution: 1:200 in 1 X PBS containing 0.5% BSA Primary Antibody: rabbit Anti-Calponin 1 + 2 + 3 (bs-4902R); Dilution: 1μg in 100 μl 1X PBS containing 0.5% BSA

## SELECTED CITATIONS

- **[IF=10.6]** Wang Weitie. et al. 3D-printing hydrogel programmed released exosomes to restore aortic medial degeneration through inhibiting VSMC ferroptosis in aortic dissection. J NANOBIOTECHNOL. 2024 Dec;22(1):1-16 WB ;Mouse. 39367412