

**Cav beta 4 Antibody**  
**Cav beta 4 Antibody, Clone S10-7**  
**Catalog # ASM10196**

**Specification**

**Cav beta 4 Antibody - Product Information**

Application **IHC, WB**  
Primary Accession [O00305](#)  
Other Accession [NP\\_000717.2](#)  
Host **Mouse**  
Isotype **IgG1**  
Reactivity **Human, Mouse, Rat, Hamster**  
Clonality **Monoclonal**

**Description**

Mouse Anti-Rat Cav beta 4 Monoclonal IgG1

**Target/Specificity**

Detects ~50kDa. No cross-reactivity against rat Cav Beta1b, Cav beta2a, and Cav betas3 in transfected cells.

**Other Names**

CAB4 Antibody, CACNLB4 Antibody, EA5 Antibody, EJM Antibody, Calcium channel voltage dependent beta 4 subunit Antibody

**Immunogen**

Synthetic peptide amino acids 458-474 of rat CavB4

**Purification**

Protein G Purified

Storage **-20°C**

**Storage Buffer**

PBS pH7.4, 50% glycerol, 0.09% sodium azide

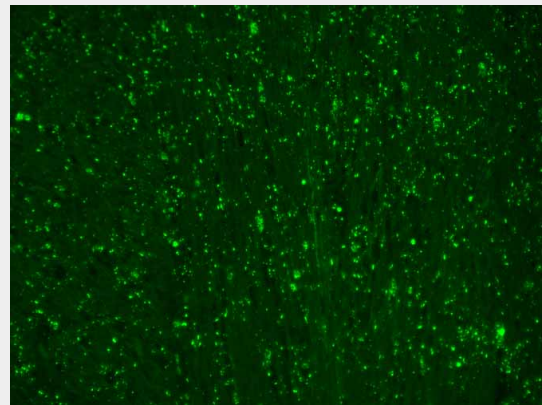
Shipping **Blue Ice or 4°C**  
Temperature

**Certificate of Analysis**

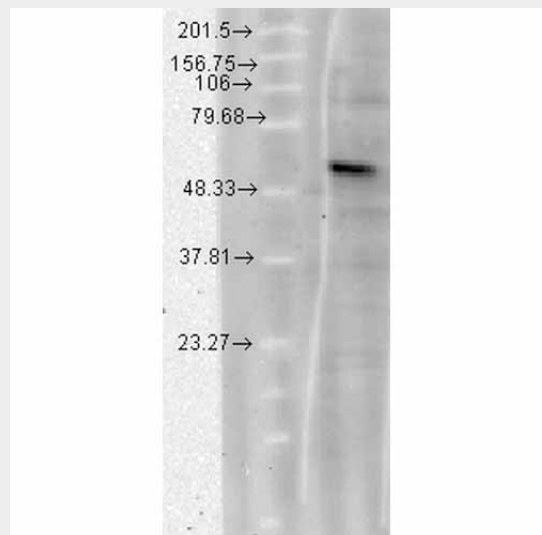
1 µg/ml of SMC-318 was sufficient for detection of Cavβ4 in 10 µg of rat brain lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

**Cellular Localization**

Cytoplasm | Cell Membrane | Synapse



Immunohistochemistry analysis using Mouse Anti-CACNB4 Calcium Channel Monoclonal Antibody, Clone S10-7 (ASM10196). Tissue: hippocampus. Species: Human. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CACNB4 Calcium Channel Monoclonal Antibody (ASM10196) at 1:1000 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



Western Blot analysis of hamster T-CHO cell lysate showing detection of CACNB4 Calcium Channel protein using Mouse Anti-CACNB4 Calcium Channel Monoclonal Antibody, Clone S10-7 (ASM10196). Load: 15 µg. Block: 1.5%

## Cav beta 4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-CACNB4 Calcium Channel Monoclonal Antibody (ASM10196) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.

## Cav beta 4 Antibody - Background

This gene encodes a member of the beta subunit family, a protein in the voltage-dependent calcium channel complex. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization and consist of a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. Various versions of each of these subunits exist, either expressed from similar genes or the result of alternative splicing. The protein described in this record plays an important role in calcium channel function by modulating G protein inhibition, increasing peak calcium current, controlling the alpha-1 subunit membrane targeting and shifting the voltage dependence of activation and inactivation. Certain mutations in this gene have been associated with idiopathic generalized epilepsy (IGE) and juvenile myoclonic epilepsy (JME). Alternate transcriptional splice variants of this gene, encoding different isoforms, have been characterized (1, 2).

## Cav beta 4 Antibody - References

1. "Entrez Gene: CACNB4 calcium channel, voltage-dependent, beta 4 subunit"
2. Xie M., et al. (2007) J Cell Biol. 178(3): 489-502.