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Product datasheet for TA328795

Cabp1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:200-1:2000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)REAMRKLLGHQVGHR, corresponding to amino acid residues 256-270 of rat Calcium Binding Protein 1. Intracellular, C-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	calcium binding protein 1
Database Link:	NP_598213 Entrez Gene 9478 HumanEntrez Gene 29867 MouseEntrez Gene 171051 Rat O88751

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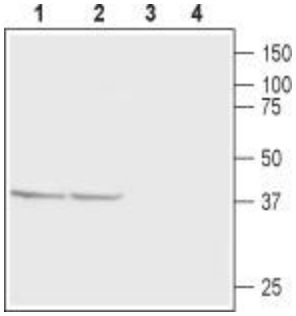
Background: Neuronal Ca2+-binding proteins (CaBP1-5) are a subclass of the calmodulin (CaM) superfamily that regulates specific Ca2+ channel targets in the brain and retina. Multiple isoforms of CaBPs are localized in different neuronal cell types and perform specialized roles in sensory transduction and disease processes. CaBP1–5 proteins have four EF hands that form pairs within the N lobe (EF1 and 2) and C lobe (EF3 and 4). The two lobes are structurally independent and connected by a flexible linker. Whereas all four EF hands bind Ca2+ in CaM, EF2 in CaBP1 does not bind Ca2+, and EF1 has reduced selectivity for Ca2+ over Mg2+. EF3 and EF4 in the C lobe of CaBP1 exhibit canonical Ca2+-induced conformational changes. CaBP-target interactions induce functional changes distinct from those caused by CaM and may diversify neuronal responses to Ca2+ signals. CaBPs interact with and reshape the functional properties of certain voltage-gated Ca2+ channels (CaVs). CaBP1 is the best characterized family member and has been shown to regulate inositol 1,4,5-triphosphate receptors (IP3Rs), P/Q-type voltage-gated Ca2+ channels, L-type Ca2+ channels, and the transient receptor potential channel (TRPC5). CaBP1 regulates the currents of CaV1 and CaV2 channels in neurons, photoreceptors, and auditory hair cells. CaBP interactions with CaV1 channels may be required for hearing and vision, as mutations that disrupt these interactions cause blindness and deafness.

Synonyms: CALBRAIN; Caldendrin; HCALB_BR

Product images:



Western blot analysis of rat brain (lanes 1 and 3) and mouse brain (lanes 2 and 4) membranes: 1, 2. Anti-Calcium-binding protein 1 antibody, (1:600). 3, 4. Anti-Calcium-binding protein 1 antibody preincubated with the control antigen.