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- Gefahrgutzuschlag
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## Recombinant Rat Calbindin D-28K

CLPRO400  
CLPRO400-2  
CLPRO400-3  
Lot:

**Description:** Calbindins are Ca-binding proteins belonging to the troponin C superfamily. CALB28K/Calbindin1/CALB1 (D28K/Spot35 protein or cholecalciferol, rat 261 aa; mouse 261 aa; human 261-aa, chromosome 8q21.3-q22.1) was originally described as 27-kDa induced by vitamin D in the duodenum of chicken. In mammals, it is expressed in the kidney, pancreatic islets, and brain. In brain, its synthesis is independent of vitamin D. CABP28K contains 4 active and 2 inactive EF-hand Ca-binding domains. The gene for CABP28K is clustered in the same region as carbonic anhydrase. The neurons in the brains of patients with Huntington disease are CAB28K depleted. There are two types of CaBPs: the "trigger"- and the "buffer"-CaBPs. The conformation of "trigger" type CaBPs changes upon Ca<sup>2+</sup> binding and exposes regions on protein that interact with target molecules, thus altering their activity. The buffer-type CABP are thought to control the intracellular calcium concentration. Calbindin D-28K is found predominantly in subpopulations of central and peripheral nervous system neurons, and in certain epithelial cells involved in Ca<sup>2+</sup> transport such as distal tubular cells and cortical collecting tubules of the kidney, and in enteric neuroendocrine cells.

**Synonyms:** Calbindin, Vitamin D-dependent calcium-binding protein, avian-type, Calbindin D28, D-28K, Spot 35 protein, Calb1, CaBP28K, MGC93326.

**Source:** *Escherichia Coli*.

**Presentation:** 1 µg (CLPRO400), 5 µg (CLPRO400-2), or 100 µg (CLPRO400-3), sterile filtered white lyophilized (freeze-dried) powder. The protein was lyophilized from a concentrated solution (1 mg/ml) containing 0.1 mM CaCl<sub>2</sub>.

**Solubility:** It is recommended to reconstitute the lyophilized CABP28K in sterile 18MΩ-cm H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized CABP28K although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution CABP28K should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

**Purity:** Greater than 90% as determined by SDS-PAGE.

*Continued...*

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**Applications:** CABP28K can be used for immunoblots, absorption experiments in immunohistochemistry, radioimmunoassay and intracellular injection.

For adsorption we suggest the following procedure A- Dilute 1 µl of the monoclonal antibody against calbindin D-28k in 5 ml of the usual buffer for immunohistochemistry (final dilution 1:5000).

B- Add 1 µg of the recombinant protein to 1 ml of the diluted antibody solution and mix well.

C- Incubate for at least 6 hours in the cold.

D- Apply to tissue-sections and incubate for 3 days.

E- Complete the immunohistochemical reaction as usual (biotinylated second antibody, ABC-complex, DAB).

As a result, the immunostaining should be strongly reduced or even completely prevented.

**Laboratory Reagent For Research Use Only**

JV 05/14/10