Data Sheet (Cat.No.TMPY-02955)

TargetMol

CABP5 Protein, Human, Recombinant (His)

General Information

Synonyms:	calcium binding protein 5;CABP3
Protein Construction:	A DNA sequence encoding the mature form of human CABP5 (Q9NP86) (Met1-Arg173) was expressed with a polyhistide tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	Q9NP86
Molecular Weight:	21.7 kDa (predicted); 19 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 0.1% Tween 20, 50 mM Arg, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

CABP3, also known as CABP5, belongs to a subfamily of calcium binding proteins, which share similarity to calmodulin. Calcium binding proteins are an important component of calcium mediated cellular signal transduction. Expression of CABP3 gene is retina-specific. The mouse homolog of CABP3 has been shown to express in the inner nuclear layer of the retina, suggested its role in neuronal functioning. The specific function of CABP3 gene is unknown. Study of the transcripts and genomic structure revealed that the 5 end of this gene is

complementary and reverse to that of the CABP5 gene, and the sequence beyond the overlapping region is nearly identical to that of CABP5. Thus, these two genes encode the protein products with distinct N-terminal halves but identical C-terminal halves. CABP3 inhibits calcium-dependent inactivation of L-type calcium channel and shifts voltage dependence of activation to more depolarized membrane potentials. It is also involved in the transmission of light signals.

Reference

McCauliffe DP,et al.(1990) A human Ro/SS-A autoantigen is the homologue of calreticulin and is highly homologous with onchocercal RAL-1 antigen and an aplysia memory molecule. J Clin Invest. 86(1):332-5.
Beutler E,et al.(1997) HLA-H and associated proteins in patients with hemochromatosis. Mol Med. 3(6):397-402.
Michalak M,et al.(2002) Calreticulin in cardiac development and pathology. Biochim Biophys Acta. 1600(1-2):32-7.

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