

CRABP2 Protein, Human, Recombinant (His)

General Information

Synonyms:	RBP6;cellular retinoic acid binding protein 2;CRABP-II
Protein Construction:	A DNA sequence encoding the human CRABP2 (NP_001869.1) (Pro2-Glu 138) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P29373
Molecular Weight:	16.5 kDa (predicted); 16.5 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:	> 96 % 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 20 mM Tris, 500 mM NaCl, pH 8.0. 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

Cellular retinoic acid-binding protein 2, also known as Cellular retinoic acid-binding protein II, CRABP-II and CRABP2, is a protein which belongs to the calycin superfamily and Fatty-acid binding protein (FABP) family. Cellular retinoic acid binding proteins (CRABP) are low molecular weight proteins whose precise function remains unknown. The predicted amino acid sequences of human CRABP1 and CRABP2 demonstrated a 99.3% and 93.5% identity to mouse CRABP1 and CRABP2, respectively. CRABP2 forms a beta-barrel structure that accommodates

hydrophobic ligands in its interior. Expression of CRABP2, but not CRABP1 mRNA, was markedly increased (greater than 15-fold) by retinoic acid treatment of fibroblasts cultured from human skin, whereas no significant induction of CRABP2 mRNA was observed in human lung fibroblasts. CRABP2 transports retinoic acid to the nucleus. It regulates the access of retinoic acid to the nuclear retinoic acid receptors. CRABP2 is necessary for elastin induction by All-trans retinoic acid (ATRA) in MRC-5 cells. It is expressed at low levels in emphysema fibroblasts. This alteration in the retinoic acid signalling pathway in lung fibroblasts may contribute to the defect of alveolar repair in human pulmonary emphysema.

Reference

Deak, K.L. et al., 2005, Birth Defects Res A Clin Mol Teratol. 73 (11): 868-75.

Plantier, L. et al., 2008, Thorax 63 (11): 1012-7.

Calmon, M.F. et al., 2009, Neoplasia 11 (12): 1329-39.

Welch, I.D. et al., 2009, Arthritis Res Ther 11 (1): R14.

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