

Product datasheet for **TP720865L**

alpha A Crystallin (CRYAA) (NM_000394) Human Recombinant Protein

Product data:

| | |
|---------------------------------------|---|
| Product Type: | Recombinant Proteins |
| Description: | Purified recombinant protein of Human crystallin, alpha A (CRYAA) |
| Species: | Human |
| Expression Host: | E. coli |
| Expression cDNA Clone or AA Sequence: | Met1-Ser173 |
| Tag: | C-His |
| Predicted MW: | 20.9 kDa |
| Concentration: | lot specific |
| Purity: | >95% as determined by SDS-PAGE and Coomassie blue staining |
| Buffer: | Lyophilized from a 0.2 um filtered solution of PBS, 2mM EDTA, pH 8.0. |
| Endotoxin: | Endotoxin level is < 0.1 ng/μg of protein (< 1 EU/μg) |
| Reconstitution Method: | Always centrifuge tubes before opening. Do not mix by vortex or pipetting. Dissolve the lyophilized protein in ddH ₂ O. It is not recommended to reconstitute a concentration less than 100 μg/ml. Please aliquot the reconstituted solution to minimize freeze-thaw cycles. |
| Storage: | Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Stability: | Stable for at least 6 months from date of receipt under proper storage and handling conditions. |
| RefSeq: | <u>NP_000385</u> |
| Locus ID: | 1409 |
| UniProt ID: | <u>A0A140G945</u> |
| RefSeq Size: | 1162 |
| Cytogenetics: | 21q22.3 |
| RefSeq ORF: | 519 |
| Synonyms: | CRYA1; CTRCT9; HSPB4 |


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Summary:

Mammalian lens crystallins are divided into alpha, beta, and gamma families. Alpha crystallins are composed of two gene products: alpha-A and alpha-B, for acidic and basic, respectively. Alpha crystallins can be induced by heat shock and are members of the small heat shock protein (HSP20) family. They act as molecular chaperones although they do not renature proteins and release them in the fashion of a true chaperone; instead they hold them in large soluble aggregates. Post-translational modifications decrease the ability to chaperone. These heterogeneous aggregates consist of 30-40 subunits; the alpha-A and alpha-B subunits have a 3:1 ratio, respectively. Two additional functions of alpha crystallins are an autokinase activity and participation in the intracellular architecture. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Alpha-A and alpha-B gene products are differentially expressed; alpha-A is preferentially restricted to the lens and alpha-B is expressed widely in many tissues and organs. Defects in this gene cause autosomal dominant congenital cataract (ADCC). [provided by RefSeq, Jan 2014]