

# $\beta$ -Crystallin (bovine), (native)

The  $\beta$ -crystallins comprise a complex group of heteropolymers which are assembled from 6 primary gene products, the acidic ( $\beta$ A1,  $\beta$ A2,  $\beta$ A3) and the basic ( $\beta$ B1,  $\beta$ B2,  $\beta$ B3) polypeptides.  $\beta$ A1 and  $\beta$ A3 are identical, except for their N-termini, and appear to be generated by alternative translation of the same gene.  $\beta$ B1 occurs in two forms, the primary gene product,  $\beta$ B1a, and  $\beta$ B1b which is generated through proteolysis. Further heterogeneity stems from post-translational modifications such as phosphorylation and/or other modifications that accumulate with aging. The subunits range in size from 23-25 kDa for the  $\beta$ A and 26- 32 kDa for the  $\beta$ B polypeptides. The  $\beta$ -crystallins can be isolated in several aggregation states, spanning a molecular weight range from about 46 kDa to > 200 kDa. These include the octameric  $\beta$ H, the tetrameric  $\beta$ L1, and the dimeric  $\beta$  forms.  $\beta$ -crystallins generally represent the second most abundant group of proteins in the lens but their proportions and properties vary with development. In the prenatal bovine lens,  $\beta$ -crystallins account for 30% of the total proteins and  $\beta$ H is predominant. In the adult, the total has increased to 40% due to an increased production of the  $\beta$ L species. With the exception of  $\beta$ B1a and  $\beta$ B1b which are found only in  $\beta$ H and appear to be responsible for its aggregation, all polypeptides are found in all forms of the protein. The  $\beta$ B2 polypeptide (previously called  $\beta$ Bp) predominates, accounting for about 50% of the total. The lack of stoichiometry in the subunit contents suggests that each of the different molecular weight populations is a mixture of aggregates with most of the major polypeptides represented. These various species appear to be in equilibrium and their proportions vary with protein concentration. It is likely that even more highly aggregated forms, are the major species in the lens.

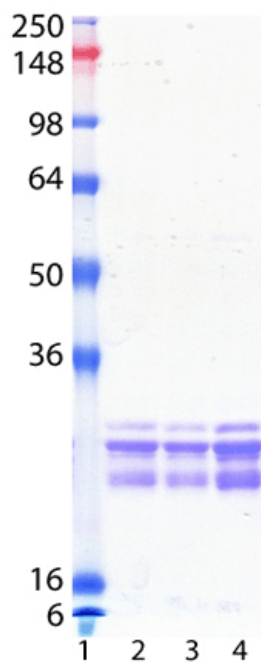
## Ordering Information

[Order Online »](#)

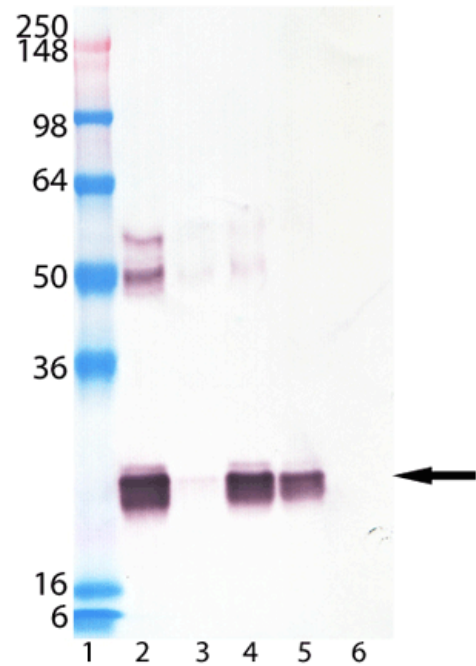
ENZ-PRT224-1000	1mg
-----------------	-----

## Manuals, SDS & CofA

[View Online »](#)



Lane 1: MWM, Lane 2: 1 $\mu$ g, Lane 3: 2 $\mu$ g, Lane 4: 6 $\mu$ g  $\beta$ -Crystallin (bovine), (native), Prod. No. ENZ-PRT224.



Lane 1: MWM, Lane 2: Bovine eye lens extract, Lane 3:  $\alpha$ -Crystallin (bovine), (native), Lane 4:  $\alpha/\beta$ -Crystallin (bovine), (native), Lane 5:  $\beta$ -Crystallin (bovine), (native), Prod. No. ENZ-PRT224, Lane 6:  $\gamma$ -Crystallin (bovine), (native) probed with  $\beta$ -Crystallin monoclonal antibody (3.H9.2), Prod. No. ADI-SPA-230.

## Handling & Storage

Long Term Storage      -80°C

Shipping      Dry Ice

## Regulatory Status

RUO - Research Use Only

## Product Details

Alternative Name      CRYBB

Application Notes      Western blot control.

Formulation      Liquid. In PBS, pH 7.2, containing 0.15M sodium chloride, 0.05M phosphate buffer, and 0.09% sodium azide.

MW      ~25kDa (observed)

Purity      ≥80% (SDS-PAGE; Western blot)

Purity Detail      Purified by multi-step chromatography.

Source      Isolated from bovine eye lens.

UniProt ID      P26444 (βA2), P11843 (βA3), P07318 (βB1), P02522 (βB2), P19141 (βB3)

Last modified: May 29, 2024



ENZO LIFE SCIENCES,  
INC.  
Phone: 800.942.0430  
[info-  
usa@enzolifesciences.com](mailto:info-usa@enzolifesciences.com)

European Sales Office  
ENZO LIFE SCIENCES  
(ELS) AG  
Phone: +41 61 926 8989  
[info-  
eu@enzolifesciences.com](mailto:info-eu@enzolifesciences.com)

Belgium, The Netherlands  
& Luxembourg  
Phone: +32 3 466 0420  
[info-  
be@enzolifesciences.com](mailto:info-be@enzolifesciences.com)

France  
Phone: +33 472 440 655  
[info-  
fr@enzolifesciences.com](mailto:info-fr@enzolifesciences.com)

Germany  
Phone: +49 7621 5500 526  
[info-  
de@enzolifesciences.com](mailto:info-de@enzolifesciences.com)

UK & Ireland  
Phone (UK customers):  
0845 601 1488  
Phone: +44 1392 825900  
[info-  
uk@enzolifesciences.com](mailto:info-uk@enzolifesciences.com)