

Accepted Manuscript

The cataract-causing mutation G75V promotes γ S-crystallin aggregation by modifying and destabilizing the native structure

Sha Zhu, Xi-Bo Xi, Tian-Li Duan, Yi Zhai, Jinyu Li, Yong-Bin Yan, Ke Yao



PII: S0141-8130(18)31602-7

DOI: doi:[10.1016/j.ijbiomac.2018.05.220](https://doi.org/10.1016/j.ijbiomac.2018.05.220)

Reference: BIOMAC 9825

To appear in: *International Journal of Biological Macromolecules*

Received date: 5 April 2018

Revised date: 25 May 2018

Accepted date: 29 May 2018

Please cite this article as: Sha Zhu, Xi-Bo Xi, Tian-Li Duan, Yi Zhai, Jinyu Li, Yong-Bin Yan, Ke Yao , The cataract-causing mutation G75V promotes γ S-crystallin aggregation by modifying and destabilizing the native structure. *Biomac* (2017), doi:[10.1016/j.ijbiomac.2018.05.220](https://doi.org/10.1016/j.ijbiomac.2018.05.220)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

The cataract-causing mutation G75V promotes γ S-crystallin aggregation by modifying and destabilizing the native structure

Sha Zhu ^{a,1}, Xi-Bo Xi ^{b,1}, Tian-Li Duan ^b, Yi Zhai ^a, Jinyu Li ^a, Yong-Bin Yan ^{b,*} and Ke Yao ^{a,*}

^a Zhejiang Provincial Key Lab of Ophthalmology, Eye Center of the 2nd Affiliated Hospital, School of Medicine, Zhejiang University, Hangzhou 310009, China

^b State Key Laboratory of Membrane Biology, School of Life Sciences, Tsinghua University, Beijing 100084, China

¹ These authors contributed equally to this work.

* **To whom all correspondence should be addressed:**

Dr. Ke Yao, Eye Center of the 2nd Affiliated Hospital, Medical College of Zhejiang University, Hangzhou, 310009, China; Phone: +86-571-87783897; Fax: +86-571-87783908; E-mail: xlren@zju.edu.cn

Or Dr. Yong-Bin Yan, School of Life Sciences, Tsinghua University, Beijing 100084, China; Phone: +86-10-6278-3477; Fax: +86-10-6277-1597; E-mail: ybyan@tsinghua.edu.cn.

Running Title: G75V deatabilizes γ S-crystallin and promotes aggregation

Keywords: γ S-crystallin; inherited mutation; autosomal dominant congenital cataract; protein aggregation; protein stability

Abbreviations: ADCC, autosomal dominant congenital cataract; ANS, 1-anilinonaphtalene-8-sulfonate; BSA, bovine serum albumin; CD, circular dichroism; DTT, dithiothreitol; E_{\max} , maximum emission wavelength of intrinsic Trp fluorescence; GdnHCl, guanidine hydrochloride; IPTG, isopropyl-1-thio- β -D-galactopyranoside; SEC, size-exclusion chromatography; WT, wild type

Download English Version:

<https://daneshyari.com/en/article/8327092>

Download Persian Version:

<https://daneshyari.com/article/8327092>

[Daneshyari.com](https://daneshyari.com)