

β-crystallin B1/crybb1 Rabbit Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	M R	Endogenous	28	Rabbit	#Q9WVJ5	12960

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

β-crystallin B1/crybb1 Rabbit Antibody recognizes endogenous levels of total β-crystallin B1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu244 of mouse β-crystallin B1 protein. Antibodies are purified by peptide affinity chromatography.

Background

β-crystallin B1, encoded by *crybb1*, is a member of the β-crystallins, one of three major crystallin types encoded by the mammalian genome, which also includes alpha- and gamma-crystallins. Crystallins are expressed at very high levels in the retinal lens and form homo/heterodimers via its N-terminal arms (1). Crystallins generally function to maintain the transparency and refractive power of the eye lens. However, they are expressed outside of the lens in other tissues and have alternative non-lens functions (2). For example, Nuc1 mutant rat, in which the *βA3/A-crystallin* gene is mutated, exhibit vascular remodeling abnormalities via an astrocyte-dependent mechanism (3,4). The precise cellular function of β-crystallins in glia is not well understood but may involve regulation of endolysosomal acidification, Golgi trafficking, and specific forms of cell death (5,6). Interestingly, *crybb1* is highly enriched in microglia outside of the mammalian lens and may serve as a distinct marker for microglia (7).

Background References

1. Van Montfort, R.L. et al. (2003) *Protein Sci* 12, 2606-12.
2. Slingsby, C. and Wistow, G.J. (2014) *Prog Biophys Mol Biol* 115, 52-67.
3. Sinha, D. et al. (2005) *Exp Eye Res* 80, 323-35.
4. Sinha, D. et al. (2012) *Transgenic Res* 21, 1033-42.
5. Ma, B. et al. (2011) *Cell Death Dis* 2, e217.
6. Valapala, M. et al. (2013) *Nat Commun* 4, 1629.
7. Crotti, A. and Ransohoff, R.M. (2016) *Immunity* 44, 505-15.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

M: Mouse **R:** Rat

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