



## Product Information

### Anti-phospho- $\alpha$ -B Crystallin (14-25)(pSer<sup>19</sup>)

Developed in Rabbit, Affinity Isolated Antibody

Product Number **C 7740**

#### Product Description

Anti-phospho- $\alpha$ -B Crystallin (14-25)(pSer<sup>19</sup>) is developed in rabbit using a synthetic phosphopeptide: F(14)FPFHS(p)PSRLFD(25) as the immunogen. The antibody was affinity isolated on immobilized immunogen.

The antibody detects phospho- $\alpha$ -B crystallin (pSer<sup>19</sup>) from bovine, human, mouse and rat samples. It does not detect the unphosphorylated form of the protein.

The antibody detects a ~20 kDa protein representing phospho- $\alpha$ -B crystallin (pSer<sup>19</sup>) from human cell extract by Western blot. Immunofluorescence staining of phospho- $\alpha$ -B crystallin (pSer<sup>19</sup>) in U373 MG cells results in cytoplasmic staining.

Lens proteins consist almost entirely of crystallins, with  $\alpha$ -crystallin comprising 40% of total lens protein composition.<sup>1,2</sup> In addition to maintaining proper refractive index, it also functions in a chaperone-like manner by preventing the formation of aggregates possibly leading to cataract formation.<sup>3,4</sup> It is believed that the phosphorylated states of  $\alpha$ -crystallin occur in response to cellular stress and may serve a structural control function and play a role in protein maintenance.<sup>4</sup>  $\alpha$ -Crystallin is composed of 2 primary gene products,  $\alpha$ -A and  $\alpha$ -B.  $\alpha$ -B crystallin, in particular, has been detected in many tissues in the central nervous system, and is considered to be a useful marker in a variety of neurodegenerative diseases.<sup>5</sup>

#### Reagent

The antibody is supplied lyophilized from phosphate buffered saline, pH 7.4, with 3% bovine serum albumin and 0.05% sodium azide as preservative.

#### Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling.

#### Storage/Stability

The lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, it should be stored at -20 °C or below. The reconstituted solution can be stored at 2-8 °C for up to 2 weeks. For longer storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Centrifuge all antibody preparations before use (10,000 x g 5 min). Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

The recommended working dilutions are 0.5  $\mu$ g/ml for Western blot, 5  $\mu$ g/ml for Immunofluorescence, and 10  $\mu$ g/ml for Immunohistochemistry (Paraffin).

**Note:** In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

#### References

1. Piatigorsky, J., *J. Struct. Funct. Genomics*, **3**, 131-137 (2003).
2. Horwitz, J., *Exp. Eye Res.*, **76**, 145-153 (2003).
3. Bhat, S.P., *Prog. Drug Res.*, **60**, 205-262 (2003).
4. Narberhaus, F., *Microbiol. Mol. Biol. Rev.*, **66**, 64-93 (2002).
5. Van Rijk, A.F. and Bloemendal, H., *Ophthalmologica*, **214**, 7-12 (2000).

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