

## Product datasheet for **KN202718**

### Alpha B Crystallin (CRYAB) Human Gene Knockout Kit (CRISPR)

#### Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 GFP-puro donor, 1 scramble control
Donor DNA:	GFP-puro
Symbol:	Alpha B Crystallin
Locus ID:	1410
Components:	<p><b>KN202718G1</b>, Alpha B Crystallin gRNA vector 1 in pCas-Guide CRISPR vector (GE100002), Target Sequence: GTTCTTCGGAGAGCACCTGT</p> <p><b>KN202718G2</b>, Alpha B Crystallin gRNA vector 2 in pCas-Guide CRISPR vector (GE100002), Target Sequence: AGAAGGGGCGCGGATCCAG</p> <p><b>KN202718D</b>, donor DNA containing left and right homologous arms and GFP-puro functional cassette.</p>

Homologous arm and GFP-puro sequences:

pUC vector backbone in gray; **Left arm sequence in blue**; **GFP-puro in green**; **Right arm in violet**

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 TTGTTGCCGG GAAGCTAGAG TAAGTAGTTC GCCAGTTAAT AGTTTGCGCA ACGTTGTTGC CATTGCTACA  
 GGCATCGTGG TGTCACGCTC GTCGTTTGGT ATGGCTTCAT TCAGCTCCGG TTCCAACGA TC

**GE100003**, scramble sequence in pCas-Guide vector

**Disclaimer:**

These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.

**RefSeq:**

[NM\\_001289807](#), [NM\\_001289808](#), [NM\\_001330379](#), [NM\\_001885](#), [NM\\_001368245](#),  
[NM\\_001368246](#)

**UniProt ID:**

[P02511](#)

**Synonyms:**

CMD1II; CRYA2; CTPP2; CTRCT16; HEL-S-101; HSPB5; MFM2

**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. 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. Elevated expression of alpha-B crystallin occurs in many neurological diseases; a missense mutation cosegregated in a family with a desmin-related myopathy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2019]

**Product images:**
