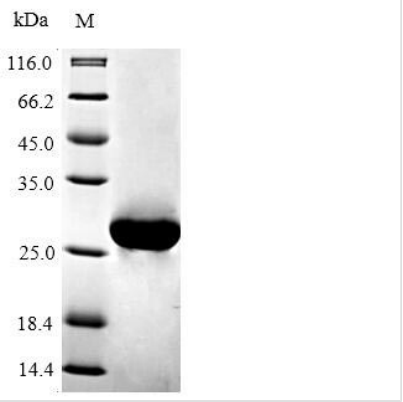
Recombinant Mouse Apoptosis regulator Bcl-2 (Bcl2), partial

Product Code	CSB-EP002611MO
Relevance	Suppresses apoptosis in a variety of cell systs including factor-dependent lymphohatopoietic and neural cells. Regulates cell death by controlling the mitochondrial mbrane permeability. Appears to function in a feedback loop syst with caspases. Inhibits caspase activity either by preventing the release of cytochrome c from the mitochondria and/or by binding to the apoptosis-activating factor (APAF-1).
Abbreviation	Recombinant Mouse Bcl2 protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P10417
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	GRTGYDNREIVMKYIHYKLSQRGYEWDAGDADAAPLGAAPTPGIFSFQPESN PMPAVHRDMAARTSPLRPLVATAGPALSPVPPVVHLTLRRAGDDFSRRYRRD FAEMSSQLHLTPFTARGRFATVVEELFRDGVNWGRIVAFFEFGGVMCVESVN REMSPLVDNIALWMTEYLNRHLHTWIQDNGGWDAFVELYGPSMRP
Research Area	Others
Source	E.coli
Target Names	Bcl2
Expression Region	5-205aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	26.7kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The gene fragment encoding the 5-205aa of the mouse BCL2 is co-expressed with the N-terminal 6xHis-tag gene in E.coli. The resulting product is the recombinant mouse BCL2, which is purified through affinity chromatography. Its purity is over 90%, confirmed by SDS-PAGE. Available in liquid or lyophilized powder, this recombinant BCL2 is perfect for experiments focusing on apoptosis, providing researchers with reliable and consistent results.

Mouse BCL2 is crucial in regulating apoptosis, particularly in B lymphocytes. In mice, BCL2 is expressed at various stages of B cell development, particularly in pro- and pre-B cells, and is crucial for early B lymphopoiesis. However, its expression diminishes in germinal centers, where B cells undergo selection and differentiation [1].

Research has demonstrated that transgenic mice overexpressing BCL2 exhibit enhanced survival rates and reduced apoptosis in various contexts, including models of sepsis and ischemia-reperfusion injury [2][3]. Furthermore, studies involving BCL2 transgenic mice have revealed that these mice have a predisposition to develop lymphomas, particularly follicular lymphoma, due to the extended lifespan of B cells and the inhibition of apoptosis [4].

Beyond lymphocyte survival, BCL2 is also implicated in bone metabolism. In osteoblasts, BCL2 overexpression can inhibit differentiation and promote apoptosis of osteocytes, indicating a complex relationship between BCL2 and bone health [5]. Additionally, the BCL2/BAX ratio is a critical determinant of cell fate, where an increase in BCL2 levels can lead to enhanced cell proliferation, while elevated BAX levels promote apoptosis [6]. This balance is essential for maintaining homeostasis in various tissues, including bone and lymphoid tissues.

References:

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[4] A. Egle, A. Harris, M. Bath, L. O'Reilly, & S. Cory, Vavp-bcl2 transgenic mice develop follicular lymphoma preceded by germinal center hyperplasia, Blood, vol. 103, no. 6, p. 2276-2283, 2004. https://doi.org/10.1182/blood-2003-07-2469
[5] T. Moriishi, Z. Maruyama, R. Fukuyama, M. Ito, T. Miyazaki, H. Kitauraet al., Overexpression of bcl2 in osteoblasts inhibits osteoblast differentiation and induces osteocyte apoptosis, Plos One, vol. 6, no. 11, p. e27487, 2011. https://doi.org/10.1371/journal.pone.0027487
[6] J. Oh, J. Lee, J. Park, J. No, & N. Lee, Obatoclax regulates the proliferation and fusion of osteoclast precursors through the inhibition of erk activation by rankl, Molecules and Cells, vol. 38, no. 3, p. 279-284, 2015. https://doi.org/10.14348/molcells.2015.2340

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.