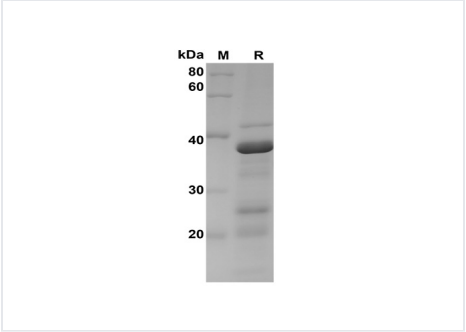
BCL2 Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	BCL2, Recombinant Protein
Full Product Name	Recombinant Rat BCL2 Protein (Sumo Tag)
Product Gene Name	BCL2 recombinant protein
Product Synonym Names	PPP1R; PPP1R50; Bcl-2; Bcl2
Sequence	Met1-Asp20 8
Host	E coli
Form/Format	Lyophilized from a 0.2um filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Purity/Purification	>90% as determined by reducing SDS-PAGE.
Preparation and Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 degree C. Reconstituted protein solution can be stored at 4-8 degree C for 2-7 days. Aliquots of reconstituted samples are stable at < -20 degree C for 3 months.
Molecular Weight	26,622 Da
Chromosome Location	Chromosome: 13; NC_005112.2 (12730736..12905108, complement). Location: 13p13
3D Structure	ModBase 3D Structure for P49950
Species	Rat
Tag	N-Sumo
Endotoxin	<10EU/mg of the protein as determined by the LAL method.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5mg/mL. Concentration is measured by UV-Vis.
Product Categories/Family for BCL2 recombinant protein	Proteins; Recombinant Proteins; Others
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for BCL2 recombinant protein	BCL2 (B-cell leukemia/lymphoma 2, N-Histidine-tagged), also known as Bcl-2, belongs to the Bcl-2 family. Bcl-2 family proteins regulate and contribute to programmed cell death or apoptosis. It is a large protein family and all members contain at least one of four BH (bcl-2 homology) domains. Certain members such as Bcl-2, Bcl-xl and Mcl1 are anti-apoptotic, whilst others are pro-apoptotic. Most Bcl-2 family members contain a C-terminal transmembrane domain that functions to target these proteins to the outer mitochondrial and other intracellular membranes. It is expressed in a variety of tissues. BCL2 blocks the apoptotic death of some cells such as lymphocytes. It also regulates cell death by controlling the mitochondrial membrane permeability and inhibits caspase activity either by preventing the release of cytochrome c from the mitochondria and/or by binding to the apoptosis-activating factor. Constitutive expression of BCL2, such as in the case of translocation of BCL2 to Ig heavy chain locus, is thought to be the cause of follicular lymphoma. Two transcript variants, produced by alternate splicing, differ in their C-terminal ends.
Other Notes	Small volumes of BCL2 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for BCL2 purchase	MBS2580959 is a recombinant protein targeting BCL2. Also known as Recombinant Rat BCL2 Protein (Sumo Tag). Host: E coli.



SDS-PAGE of BCL2 recombinant protein
SDS-PAGE analysis of Rat BCL2 proteins, 2ug/lane of Recombinant Rat BCL2 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 38KD

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BCL2. It may not necessarily be applicable to this product.

NCBI GI #	1004379
NCBI GeneID	24224
NCBI Accession #	AAA77687.1
UniProt Primary Accession #	P49950
UniProt Secondary Accession #	Q62837; Q64032
UniProt Related Accession #	P49950; Q7TSN8; Q9R1B3
GenBank Nucleotide #	U34964.1
NCBI Official Full Name	BCL-2
NCBI Official Synonym Full Names	B-cell CLL/lymphoma 2
NCBI Official Symbol	Bcl2
NCBI Official Synonym Symbols	Bcl-2
UniProt Protein Name	Apoptosis regulator Bcl-2
Protein Family	Apoptosis regulator
UniProt Gene Name	Bcl2
UniProt Synonym Gene Names	Bcl-2
UniProt Entry Name	BCL2_RAT
NCBI Protein Information	apoptosis regulator Bcl-2; Bcl2-like protein; B-cell leukemia/lymphoma 2; B cell lymphoma 2 associated oncogene
NCBI Summary for BCL2	an anti-apoptotic protein; involved in inhibiting cell death in many different cell types [RGD]

UniProt Comments for BCL2	Function: Suppresses apoptosis in a variety of cell systems including factor-dependent lymphohematopoietic and neural cells. Regulates cell death by controlling the mitochondrial membrane permeability. Appears to function in a feedback loop system 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). Subunit structure: Forms homodimers, and heterodimers with BAX, BAD, BAK and Bcl-X(L). Heterodimerization with BAX requires intact BH1 and BH2 motifs, and is necessary for anti-apoptotic activity. Also interacts with APAF1, BBC3, BCL2L1, BNIPL, EI24, FKBP8, MRPL41, RAF-1, TP53BP2. Interacts with BAG1 in an ATP-dependent manner Subcellular location: Mitochondrion outer membrane; Single-pass membrane protein. Nucleus membrane; Single-pass membrane protein. Endoplasmic reticulum membrane; Single-pass membrane protein. Tissue specificity: Expressed in a variety of tissues, with highest levels in reproductive tissues. In the adult brain, expression is localized in mitral cells of the olfactory bulb, granule and pyramidal neurons of hippocampus, pontine nuclei, cerebellar granule neurons, and in ependymal cells. In prenatal brain, expression is higher and localized in the neuroepithelium and in the cortical plate. Domain: The BH4 motif is required for anti-apoptotic activity and for interaction with RAF-1 Post-translational modification: Phosphorylation/dephosphorylation on Ser-70 regulates anti-apoptotic activity. Growth factor-stimulated phosphorylation on Ser-70 by PKC is required for the anti-apoptosis activity and occurs during the G2/M phase of the cell cycle. In the absence of growth factors, BCL2 appears to be phosphorylated by other protein kinases such as ERKs and stress-activated kinases. Dephosphorylated by protein phosphatase 2A (PP2A) By similarity.Proteolytically cleaved by caspases during apoptosis. The cleaved protein, lacking the BH4 motif, has pro-apoptotic activity, causes the release of cytochrome c into the cytosol promoting further caspase activity By similarity.Monoubiquitinated by PARK2, leading to increase its stability Sequence similarities: Belongs to the Bcl-2 family.
Research Articles on BCL2	**1.** These results indicated that the Bcl-2 and Bax played a pivotal role in the gastric mucosal I-R injury and repair by activation of ERK1/2.
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