

GeneBlocker™ pGB siRNA Vector Mix

- Cat.#** 9511-20 (20 µg), -60 (60 µg) GeneBlocker™ AIF siRNA Vector Mix
 9512-20 (20 µg), -60 (60 µg) GeneBlocker™ BAD siRNA Vector Mix
 9513-20 (20 µg), -60 (60 µg) GeneBlocker™ BAX siRNA Vector Mix
 9514-20 (20 µg), -60 (60 µg) GeneBlocker™ Bcl-2 siRNA Vector Mix
 9515-20 (20 µg), -60 (60 µg) GeneBlocker™ BID siRNA Vector Mix
 9516-20 (20 µg), -60 (60 µg) GeneBlocker™ cIAP-1 siRNA Vector Mix
 9517-20 (20 µg), -60 (60 µg) GeneBlocker™ cIAP-2 siRNA Vector Mix
 9518-20 (20 µg), -60 (60 µg) GeneBlocker™ Hsp90 alpha siRNA Vector Mix
 9500C-1 (GeneBlocker™ Negative Control siRNA Vector, pGB-Control)
 9500-1 (GeneBlocker™ siRNA Cloning Vector, pGB)

Introduction:

Small interfering RNAs (siRNAs) are short, double-stranded RNA molecules that can target and degrade specific complementary mRNAs. The target gene-specific degradation is an effective means of gene suppression. *BioVision's* GeneBlocker™ pGB siRNA vectors are designed to provide efficient, long-term suppression of a target gene in cultured mammalian cells and *in vivo*. The pGB vectors have been optimized for suppressing expression of target genes using the human U6 promoter (a RNA polymerase III promoter) which generates large amounts of siRNA in mammalian cells. The pGB vectors also provide neomycin resistance marker for the selection of stable cell lines, permitting long-term suppression of the target gene. *BioVision* offers pGB siRNA vector mix which consists of 4 siRNA vectors for each gene targeted. pGB siRNA negative control vector and pGB cloning vector for cloning in your own insert are also available.

Description of the Vectors:

pGB expression vectors contain the human U6 RNA polymerase III promoter, which directs constitutive, high-level expression of short RNA transcripts in many cells. Each vector also contains the neomycin/kanamycin-resistance gene to provide kanamycin resistance in bacteria and the G418 resistance in mammalian cells. In addition, **pGB Cloning vector** which is used to clone your own insert and **pGB Negative Control vector** which contains an insert that does not have significant homology to mammalian genes expressed in human, mouse, and rat, and therefore can be used as a negative control for pGB-expression vectors. The pGB siRNA vectors are designed to suppress the expression of some of the most important apoptosis genes, individually. The mix of four siRNA vectors for each gene has been proven more efficient for gene suppression.

Applications:

The pGB siRNA vector Mix (1 µg/µl) can be transfected into mammalian cells using Lipofectamine (Invitrogen). For transient transfection, cells can be analyzed in 24-96 hours following transfections, by Western blot analysis or other detection means. For stable transfections, cells can be selected in G418 selection medium to obtain stable cell lines with the specific gene blocked.

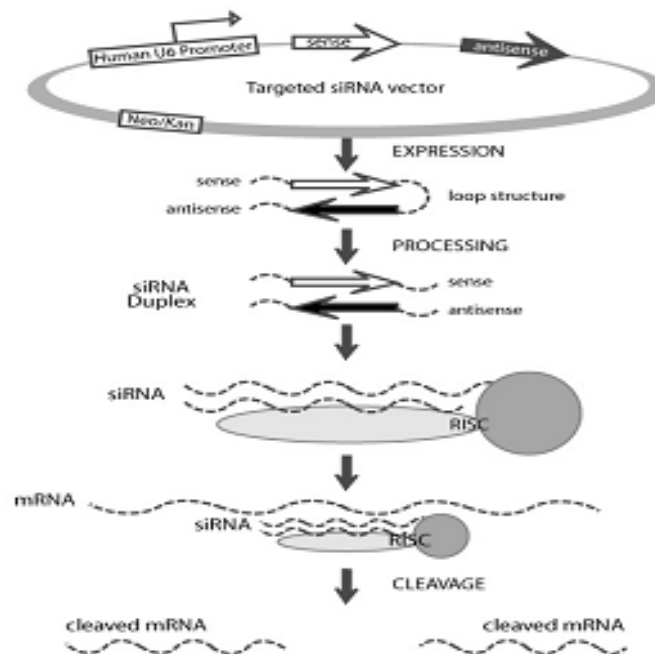


Fig. 1. Schematic Diagram of the RNA Interference Mechanism.

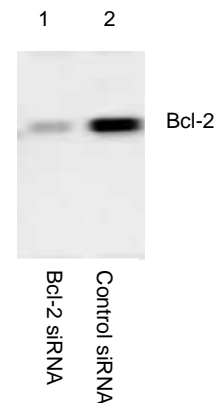
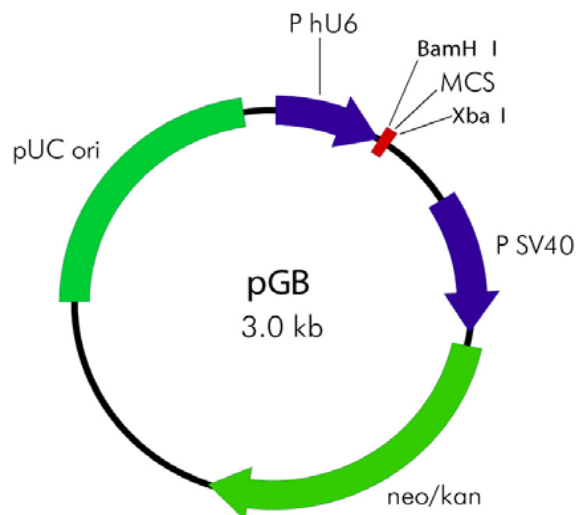


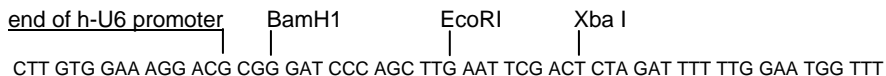
Fig. 2. GeneBlocker™ pGB Bcl-2 siRNA Vector Blocks Bcl-2 Expression in HeLa Cells. Bcl-2 siRNA Vector (pGB-Bcl-2) was transfected into HeLa cells using Lipofectamine (Invitrogen). PGB-Control Vector with a siRNA sequence that has no homology to mammalian gene was also transfected as a negative control. Western blot was probed with a Bcl-2 polyclonal antibody (BioVision; Cat. 3033-100).

pGB Vector Map



pGE-1 Multiple Cloning Site Region

(Sequence shown 249-308)



Features and Positions:

Human U6 Promoter:	1-256
Multiple cloning Site:	259-285
3' Primer:	398-426 (GAAGCATTATCAGGGTTATTGTCTCATG)
SV40 Promoter:	470-808
Neomycin/Kanamycin Resistance ORF:	843-1634
5' Primer:	2789-2813 (CGTCGATTTTTGTGATGCTCGTCAG)
pUC Origin of Replication:	2222-3003

RELATED PRODUCTS:

Apoptosis Detection Kits & Reagents

- Annexin V Kits & Bulk Reagents
- Caspase Assay Kits & Reagents
- Mitochondrial Apoptosis Kits & Reagents
- Nuclear Apoptosis Kits & Reagents
- Apoptosis Inducers & Inhibitors
- Apoptosis Isolation Kit

Cell Fractionation System

- Mitochondria/Cytosol Fractionation Kit
- Nuclear/Cytosol Fractionation Kit
- Membrane Protein Extraction Kit
- Cytosol/Particulate Rapid Separation Kit
- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System

Cell Proliferation & Senescence

- Quick Cell Proliferation Assay Kit
- Senescence Detection Kit
- High Throughput Apoptosis/Cell Viability Assay Kits
- LDH-Cytotoxicity Assay Kit
- Bioluminescence Cytotoxicity Assay Kit
- Live/Dead Cell Staining Kit

Cell Damage & Repair

- HDAC Fluorometric & Colorimetric Assays & Drug Discovery Kits
- HAT Colorimetric Assay Kit & Reagents
- DNA Damage Quantification Kit
- Glutathione Fluorometric & Colorimetric Assay Kits
- Nitric Oxide Fluorometric & Colorimetric Assay Kits

Signal Transduction

- cAMP & cGMP Assay Kits
- Akt & JNK Activity Assay Kits
- Beta-Secretase Activity Assay Kit

Adipocyte & Lipid Transfer

- Recombinant Adiponectin, Survivin, & Leptin
- CETP Activity Assay & Drug Discovery Kits
- Total Cholesterol Quantification Kit

Molecular Biology & Reporter Assays

- siRNA Vectors
- Cloning Insert Quick Screening Kit
- Mitochondrial & Genomic DNA Isolation Kits
- 5 Minutes DNA Ligation Kit
- 20 Minutes Gel Staining/Destaining Kit

Antibodies & Recombinant Proteins (many)