GeneBlocker™ Caspase siRNA Vector

Cat. #	9500-20 (20 µg)	GeneBlocker™ siRNA Cloning Vector
	9500C-20 (20 µg)	GeneBlocker™ Negative Control siRNA Vector
	9501-20 (20 µg),-60 (60 µg)	GeneBlocker™ Caspase-1 siRNA Vector
	9503-20 (20 µg),-60 (60 µg)	GeneBlocker™ Caspase-3 siRNA Vector
	9508-20 (20 µg),-60 (60 µg)	GeneBlocker™ Caspase-8 siRNA Vector
	9509-20 (20 µg),-60 (60 µg)	GeneBlocker™ Caspase-9 siRNA Vector

Concentration: 1 µg/µl

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 in mammalian cells by using the human U6 promotor (a RNA polymerase III promotor) which generates large amounts of siRNA in mammalian cells. The pGB expression vector also provides neomycin resistance marker for the selection of stable cell lines, permitting long-term suppression of the target gene. *BioVision* currently offers pGB siRNA vectors targeting to different caspases, Bcl-2 family members and other apoptosis related genes, as well as pGB siRNA negative control vector and pGB cloning vector for cloning in your own insert.

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. The **pGB vector** is used to clone your own insert. The vector contains two unique restriction sites, BamH I and Xba I for directional cloning. The **pGB Negative Control vector** contains a insert that does not have significant homology to mammalian genes expressed in human, mouse, and rat, and it can be used as a negative control for pGB-Caspase siRNA vectors. The **pGB Caspase siRNA vectors** contain the siRNA inserts designed to suppress the expression of each caspase individually.

Applications:

The pGB siRNA vectors 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.

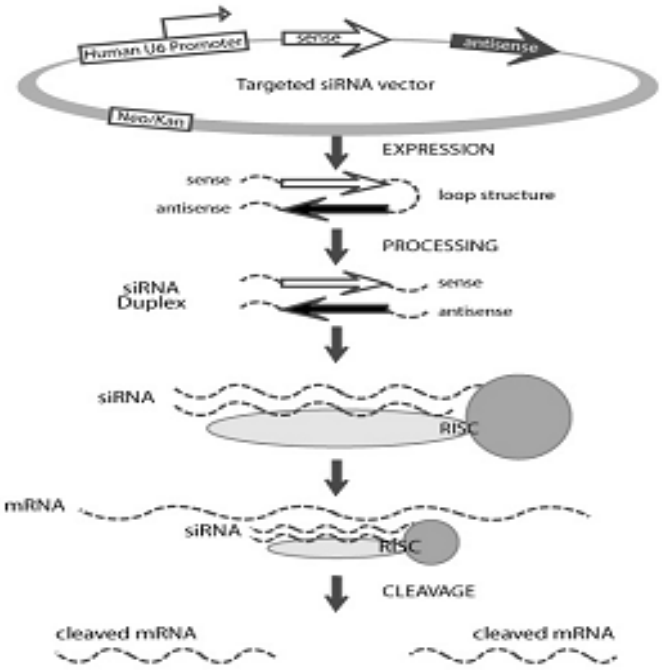

Fig. 1. Schematic Diagram of the RNA Interference Mechanism.

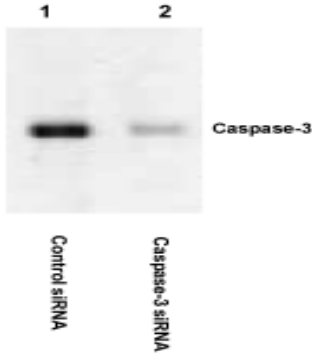

Fig. 2. GeneBlocker™ pGB siRNA Vector Blocks Caspase Expression in HeLa Cells. Caspase siRNA Vector (pGB-Casp-3) was transfected into HeLa cells using Lipofectamine (Invitrogen). PGB-Control Vector with a siRNA sequence that has no homology to mammalian gene was also transfected as a negative control. Western blot was probed with a caspase-3 polyclonal antibody (BioVision; Cat. 3138-100).

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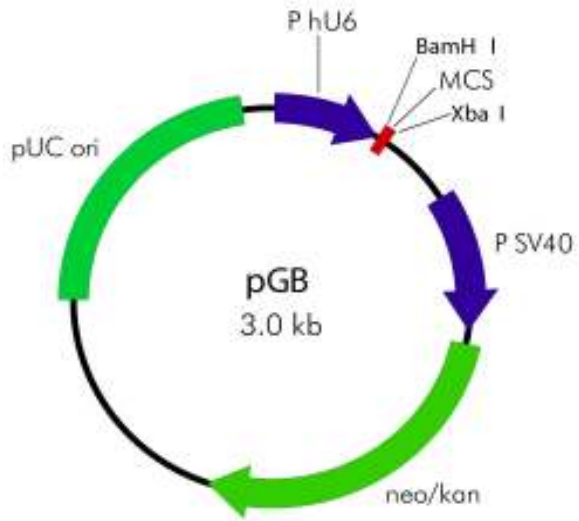
pGB Vector Map



pGE-1 Multiple Cloning Site Region

(Sequence shown 249-308)

end of h-U6 promoter | BamH1 | EcoRI | Xba I

CTT GTG GAA AGG ACG CGG GAT CCC AGC TTG AAT TCG ACT CTA GAT TTT TTG GAA TGG TTT

Features and Positions:

Human U6 Promoter:	1-256
Multiple cloning Site:	259-285
3' Primer:	398-426 (GAAGCATTTATCAGGGTTATTGTCTCATG)
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 and Set
- Apoptosis siRNA Vectors

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 & 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
- PLTP 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
- β -Galactosidase Staining Kit & Luciferase Reporter Assay Kit

Growth Factors and Cytokines

Monoclonal and Polyclonal Antibodies

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