Product: Expression Arrest™ pSM2 empty vector

Catalog #: RHS1763

The laboratory of Dr. Greg Hannon at Cold Spring Harbor Laboratory (CSHL) has created an RNAi Clone Library comprised of multiple short-hairpin RNAs (shRNAs) specifically targeting annotated human and mouse genes. The shRNA Library permits rapid, cost efficient, loss-of-function genetic screens and rapid tests for genetic interactions to be performed in mammalian cells. Each shRNA has been cloned and sequence verified to ensure a match to the target gene.

The shRNA Control Vector (See Figure 1) is a negative control for any transfection experiment performed using the Expression Arrest™ shRNA-containing expression vectors. This control vector is pSHAG-MAGIC 2 without an insert.

Each vial of the shRNA Control Vector is shipped at a concentration of 0.25μg/μl in a total volume of 40μl, thus providing a total amount of 10μg vector DNA.

shRNA vector storage

The vector DNA is shipped in a microfuge tube at room temperature and should be stored at -20°C or -80°C.

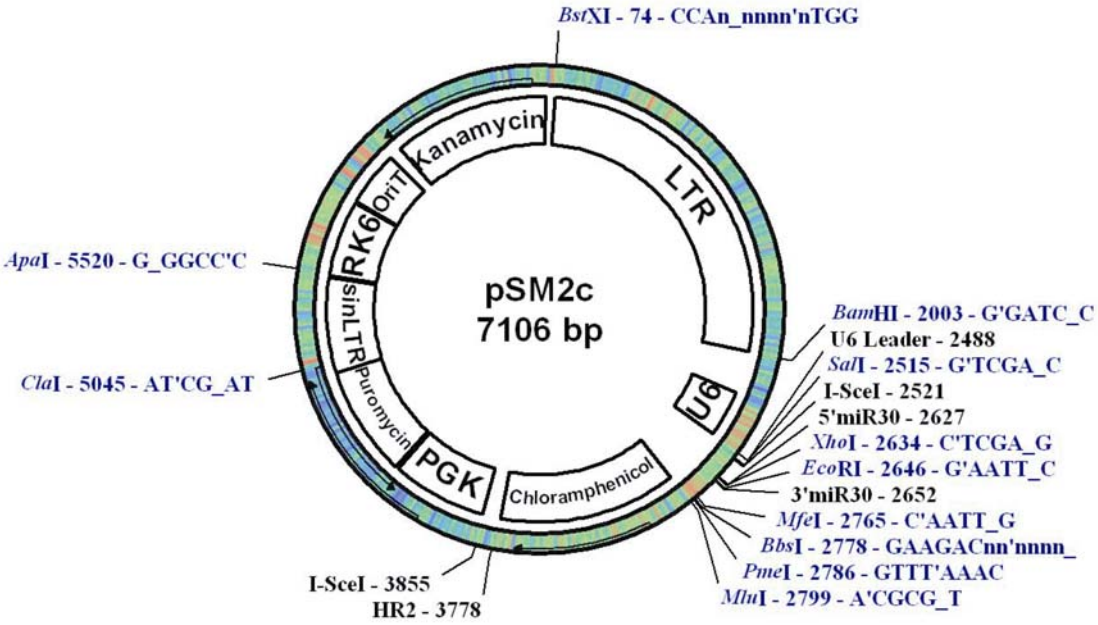

Figure 1: Vector Map of pSHAG-MAGIC 2

Note: The pSM vectors must be transformed into PIR1 competent bacteria. These plasmids harbor a conditional bacterial origin of replication, which requires the expression of the "pir1" gene to be rendered functional.

Antibiotic Resistance
pSHAG-MAGIC 2 contains 3 antibiotic resistance markers. (See Table 1)

Table 1: Antibiotic Resistance Conveyed by pSHAG-MAGIC 2

Antibiotic	Concentration	Utility
Chloramphenicol	25µg/ml	Bacterial selection marker (shRNA insert)
Kanamycin	25µg/ml	Bacterial selection marker (vector)
Puromycin		Mammalian selectable marker

The pSHAG-MAGIC expression vector is a self-inactivating (SIN) MSCV retroviral vector, containing a NheI/XbaI deletion in the U3 region of the 3' LTR. Self-inactivating MSCV particles can be produced by transfection into commonly available retroviral packaging lines.

Useful References:

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Paddison, P.J., Silva, J.M., Conklin, D.S., Schlabach, M., Li, M., Aruleba, S., Balija, V., O'Shaughnessy, A., Gnoj, L., Scobie, K. Chang, K., Westbrook, T., Sachidanandam, R., McCombie W.R., Elledge, S.J., & Hannon, G.J. *A resource for large-scale RNAi based screens in mammals.* Nature, March 25; 427-431. (2004)

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Taira, K., Miyagishi, M. *U6 promoter-driven siRNAs with four uridine 3' overhangs efficiently suppress targeted gene expression in mammalian cells*. Nature Biotechnology 19, 497-500. (2002).

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