

Product: OSDupDel.Hygro Vector

Catalog #: MES3975

The OSDupDel vectors, originally developed in the laboratory of Dr. Oliver Smithies, are generic gene targeting vectors that can be used to either duplicate or delete a sequence of interest in the genome with base pair accuracy. Duplications can be much larger than can be accommodated by a standard targeting construct (up to 80-100Kb) and deletions of 20-30Kb made with ease with 50Kb being the largest ever made. This makes it possible to duplicate or delete entire genes with a single targeting reaction. The same vector can be used to accomplish both deletions and duplications since the outcome is determined simply by the order in which the vector components are arranged. Duplications can also bring in reporters, promoters, mutations, or any other sequence of interest into the genome with single base precision while leaving the endogenous gene intact. The Hygromycin selection marker offers an effective selection strategy. See the references below for more information.

Each vial of the OSDupDel.Hygro Vector is shipped at a concentration of 0.25µg/µl in a total volume of 20µl, thus providing a total amount of 5µg vector DNA.

OSDupDel.Hygro vector storage

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

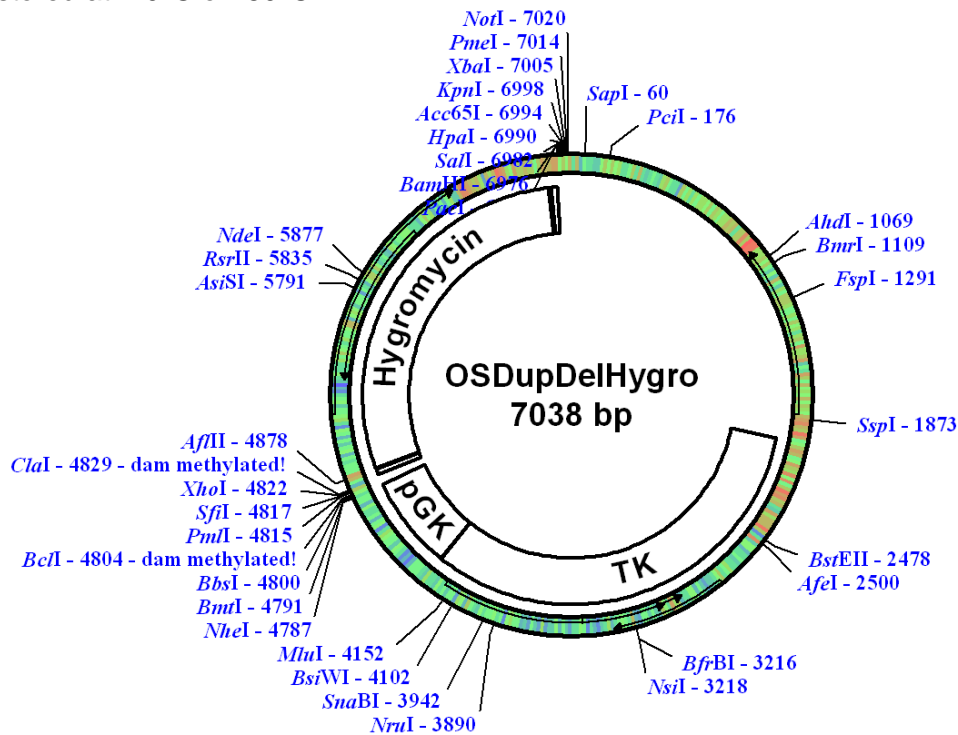


Figure 1: Vector Map of OSDupDel.Hygro



Antibiotic Resistance

OSDupDel.Hygro contains an Ampicillin resistance marker. A concentration of 50 to 100ug/ml of Ampicillin is recommended for growth of *E.coli* harboring the OSDupDel.Hygro plasmid.

Useful References:

Takahashi N, Hagman J.R., Hyung-Suk K, Smithies O 2003 Minireview: Computer Simulations of Blood Pressure Regulation by the Renin-Angiotensin System
Endocrinology 144(6): 2184-2190

Smithies O, Kim H-S 1994 Targeted gene duplication and disruption for analyzing quantitative genetic traits in mice Proceedings of the National Academy of Sciences USA 91:3612-3615

Smithies O, Hyung-Suk K, Takahashi N, Edgell MH 2000 Importance of quantitative genetic variations in the etiology of hypertension Kidney International 58: 2265-2280

Valancius V, Smithies O 1991 Double-stranded gap repair in a mammalian gene targeting reaction Molecular and Cellular Biology 11(9): 4389-4397