

Percent_identity 20 25 30 35 40

Function of Matched Query Gene

Export Glycosyl Transferase Hydrolase Polymerization Polymerization & Export Precursor Synthesis

Query

pslA pslB pslC pslD pslE pslF pslG pslH pslI pslJ pslK pslL

CoA-binding domain Bacterial sugar transferase Nucleotidyl transferase Mannose-6-phosphate isomerase Carbohydrate biosynthesis/export protein Putative tyrosine kinase GT 91 Cellulase (GH5) GT 4-like domain GT 91 GT 14 GT 91 Lipid II flippase MurJ Acyltransferase family

0 5000 10000 15000

EsbW_18-Q3-R4-48_BAT3C.93

Proteobacteria

Gammaproteobacteria

Betaproteobacteriales

B1-7BS

midas_g_190

midas_s_48

pslA pslB pslC pslD pslE pslF pslG pslH pslI pslJ pslK pslL

GT 12 GT 12 GT 12 GT 91 Acetyltransferase (GNAT) family Acyltransferase family GT 12 GT 12 O-Antigen ligase Methyltransferase FkbM domain Carbohydrate biosynthesis/export protein Chain length determinant protein Putative tyrosine kinase Amino acid transferase Polysaccharide glycosyltransferase domain Glutamine amidotransferase Asparagine synthase GT 12 GT 91 Bacterial sugar transferase AAA domain Fibronectin type III domain NA gyrase/topoisomerase IV, subunit A DNA gyrase B DNA gyrase C DNA gyrase D ABC-2-type transporter ABC-2-type transporter ABC-2-type transporter

0 10000 20000 30000 40000

Hirt_18-Q3-R61-65_MAXAC.231

Proteobacteria

Gammaproteobacteria

Betaproteobacteriales

B1-7BS

midas_g_190

midas_s_48

pslA pslB pslC pslD pslE pslF pslG pslH pslI pslJ pslK pslL

GT 12 GT 12 GT 12 GT 91 Acetyltransferase (GNAT) family Acyltransferase family GT 12 GT 12 O-Antigen ligase Methyltransferase FkbM domain Carbohydrate biosynthesis/export protein Chain length determinant protein Putative tyrosine kinase Amino acid transferase Polysaccharide glycosyltransferase domain Glutamine amidotransferase Asparagine synthase GT 12 GT 91 Bacterial sugar transferase AAA domain Fibronectin type III domain NA gyrase/topoisomerase IV, subunit A DNA gyrase B DNA gyrase C DNA gyrase D ABC-2-type transporter ABC-2-type transporter ABC-2-type transporter

0 10000 20000 30000 40000

start