Unfortunately, the restriction digest was not successful (or only partial) in most cases. This can have several reasons; some are listed <u>here</u>.

To me, a reduced restriction enzyme activity seems likely. Multiple (> 3) freeze-thaw cycles and temperature fluctuations can already have a negative influence on restriction enzyme's activity.

You should be able to use the signals from the undigested plasmids to assign the plasmids.

If the digestion would have worked correctly, a pattern as shown on the figure below was expected. Note, that the smaller fragment might be very difficult to detect in a "real" gel (because small fragments incorporate less of the fluorescent dye).

Ladder	Life 1 kb Plus			
1	pAGM1311 - Bsal			
2	pICH41331 - Bsal			
3	pICH86966 - Bsal			
	Ladder	1	2	3
12.0 kb				
12.0 kb 11.0 kb 10.0 kb				
9.0 kb 8.0 kb				
7.0 kb				
6.0 kb				
5.0 kb				
4.0 kb				
3.0 kb				
2.0 kb				
1.6 kb				
1.0 kb				
850 bp				
650 bp				
500 bp				
400 bp				
300 bp				
200 bp				
100 hp				
100 bp				