

**Table S7.** Sequence percent identity of regulatory genes and proteins, comparing each PST to the closest related previously sequenced phage.

***cIII* (DNA)**

PST1 and EDL933	98.79
PST3 and EC4115	97.58

***cIII* (Amino Acid)**

PST1 and EDL933	98.15
PST3 and EC4115	98.15

***N* (DNA)**

PST1 and EDL933	71.43
PST3 and EC4115	47.92

***N* (Amino Acid)**

PST1 and EDL933	58.89
PST3 and EC4115	17.76

***cI* (DNA)**

PST1 and EDL933	49.56
PST2 and O104:H4 2011C-3493	100.00
PST3 and EC4115	59.59

***cI* (Amino Acid)**

PST1 and EDL933	18.75
PST2 and O104:H4 2011C-3493	100.00
PST3 and EC4115	14.62

***cro* (DNA)**

PST1 and EDL933	18.84
PST2 and O104:H4 2011C-3493	100.00
PST3 and EC4115	26.47

***cro* (Amino Acid)**

PST1 and EDL933	18.75
PST2 and O104:H4 2011C-3493	100.00
PST3 and EC4115	14.62

***cII* (DNA)**

PST1 and EDL933	95.96
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PST3 and EC4115	88.55
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***cII* (Amino Acid)**

PST1 and EDL933	95.92
PST3 and EC4115	86.73

***O* (DNA)**

PST1 and EDL933	57.03
PST2 and O104:H4 2011C-3493	95.73
PST3 and EC4115	98.62

***O* (Amino Acid)**

PST1 and EDL933	8.81
PST2 and O104:H4 2011C-3493	98.22
PST3 and EC4115	99.68

***P* (DNA)**

PST1 and EDL933	70.76
PST2 and O104:H4 2011C-3493	97.22
PST3 and EC4115	96.72

***P* (Amino Acid)**

PST1 and EDL933	10.73
PST2 and O104:H4 2011C-3493	96.90
PST3 and EC4115	97.85

***Q* (DNA)**

PST1 and EDL933	100.00
PST2 and O104:H4 2011C-3493	95.63
PST3 and EC4115	100.00

***Q* (Amino Acid)**

PST1 and EDL933	100.00
PST2 and O104:H4 2011C-3493	95.83
PST3 and EC4115	100.00