

Table S1. Best match predictions (highlighted in grey) based on mapping against all SCCmec type references.

Isolate ID	Reference (accession number)	ID %	Coverage %	Best match
BI1985	SCCmec III (AM904732.1)	99.96	92.60	SCCmec III
NY14853PPY10094	SCCmec III (AM904732.1)	99.80	100	SCCmec III
MI48910PPY10092	SCCmec III (AM904732.1)	92.80	100	SCCmec III
AL36849PPY10048	SCCmec IVa (AB063172)	78.20	76.70	SCCmec IVg
	SCCmec IVb (AB063173)	78.70	90.60	
	SCCmec IVc (AB096217)	83.00	65.50	
	SCCmec IVd (AB097677)	87.50	62.00	
	SCCmec IVg (DQ106887)	87.30	99.10	
	SCCmec IVh (HE681097)	79.80	78.40	
	SCCmec IVi (AB425823)	92.10	10.10	
	SCCmec IVj (AB425824)	79.60	61.10	
	SCCmec IVk (GU122149)	76.20	7.40	
	SCCmec IVl (AB633329)	80.30	54.40	
	SCCmec IVm (AB872254)	79.60	61.10	
	SCCmec IVn (KX385846.1)	82.20	80.30	
AL36849PPY10061	SCCmec IVa (AB063172)	84.50	87.30	SCCmec IVg
	SCCmec IVb (AB063173)	86.10	99.90	
	SCCmec IVc (AB096217)	83.10	75.50	
	SCCmec IVd (AB097677)	75.70	81.30	
	SCCmec IVg (DQ106887)	99.40	99.90	
	SCCmec IVh (HE681097)	86.40	81.70	
	SCCmec IVi (AB425823)	81.80	94.50	
	SCCmec IVj (AB425824)	87.00	95.90	
	SCCmec IVk (GU122149)	77.60	41.20	
	SCCmec IVl (AB633329)	86.30	62.00	
	SCCmec IVm (AB872254)	80.80	23.20	
	SCCmec IVn (KX385846.1)	80.70	79.70	
KS66506PPY30089	SCCmec IVa (AB063172)	94.80	65.90	SCCmec IVg
	SCCmec IVb (AB063173)	95.10	77.60	
	SCCmec IVc (AB096217)	97.30	52.60	
	SCCmec IVd (AB097677)	97.20	52.10	
	SCCmec IVg (DQ106887)	99.40	86.20	
	SCCmec IVh (HE681097)	97.20	63.70	
	SCCmec IVi (AB425823)	91.70	72.70	
	SCCmec IVj (AB425824)	98.10	72.00	
	SCCmec IVk (GU122149)	94.60	32.30	
	SCCmec IVl (AB633329)	97.10	46.60	
	SCCmec IVm (AB872254)	92.10	57.10	
	SCCmec IVn (KX385846.1)	95.70	59.80	
ND58102PPY20076	SCCmec IVa (AB063172)	79.70	69.70	SCCmec IVg

	SCCmec IVb (AB063173)	80.20	82.20	
	SCCmec IVc (AB096217)	97.40	36.10	
	SCCmec IVd (AB097677)	96.20	52.70	
	SCCmec IVg (DQ106887)	85.90	90.50	
	SCCmec IVh (HE681097)	95.90	48.40	
	SCCmec IVi (AB425823)	79.20	78.30	
	SCCmec IVj (AB425824)	82.50	76.30	
	SCCmec IVk (GU122149)	95.00	25.10	
	SCCmec IVl (AB633329)	81.80	49.30	
	SCCmec IVm (AB872254)	80.00	59.50	
	SCCmec IVn (KX385846.1)	94.30	46.60	
BI1979	SCCmec Va (AB121219.1)	87.30	52.60	SCCmec V (5C2&5)
	SCCmec Vb (AB462393.1)	91.50	62.80	
	SCCmec Vb (AB512767.1)	91.90	72.60	
	SCCmec Vb (AB478780.1)	91.60	72.70	
	SCCmec Vc (AB505629.1)	92.50	59.60	
	SCCmec V(T) (FJ544922.1)	99.80	95.40	
BI1980	SCCmec Va (AB121219.1)	81.30	62.60	SCCmec V (5C2&5)
	SCCmec Vb (AB462393.1)	83.70	51.20	
	SCCmec Vb (AB512767.1)	83.90	59.10	
	SCCmec Vb (AB478780.1)	83.70	59.30	
	SCCmec Vc (AB505629.1)	82.90	50.60	
	SCCmec V(T) (FJ544922.1)	84.80	89.30	
BI1981	SCCmec Va (AB121219.1)	84.80	55.20	SCCmec V (5C2&5)
	SCCmec Vb (AB462393.1)	97.90	47.80	
	SCCmec Vb (AB512767.1)	98.50	55.20	
	SCCmec Vb (AB478780.1)	98.00	55.30	
	SCCmec Vc (AB505629.1)	99.00	49.30	
	SCCmec V(T) (FJ544922.1)	99.70	91.30	
BI1984	SCCmec Va (AB121219.1)	80.00	54.80	SCCmec V (5C2&5)
	SCCmec Vb (AB462393.1)	89.00	42.90	
	SCCmec Vb (AB512767.1)	89.30	49.40	
	SCCmec Vb (AB478780.1)	89.00	49.60	
	SCCmec Vc (AB505629.1)	88.50	43.10	
	SCCmec V(T) (FJ544922.1)	91.50	71.80	
BI1990	SCCmec Va (AB121219.1)	81.70	54.80	SCCmec V (5C2&5)
	SCCmec Vb (AB462393.1)	90.20	42.10	
	SCCmec Vb (AB512767.1)	90.10	50.40	
	SCCmec Vb (AB478780.1)	90.20	48.80	
	SCCmec Vc (AB505629.1)	91.10	38.90	
	SCCmec V(T) (FJ544922.1)	91.60	65.50	
BI1991	SCCmec Va (AB121219.1)	82.90	48.10	SCCmec V (5C2)
	SCCmec Vb (AB462393.1)	83.80	28.60	
	SCCmec Vb (AB512767.1)	83.80	33.40	

	SCCmec Vb (AB478780.1)	83.40	33.00	
	SCCmec Vc (AB505629.1)	85.10	27.90	
	SCCmec V(T) (FJ544922.1)	73.00	61.30	
BI2002	SCCmec Va (AB121219.1)	79.40	69.00	
	SCCmec Vb (AB462393.1)	80.10	39.60	
	SCCmec Vb (AB512767.1)	80.10	46.30	SCCmec V (5C2)
	SCCmec Vb (AB478780.1)	80.00	45.80	
	SCCmec Vc (AB505629.1)	84.80	28.40	
	SCCmec V(T) (FJ544922.1)	73.30	62.20	
BI2003	SCCmec Va (AB121219.1)	81.70	56.60	
	SCCmec Vb (AB462393.1)	87.50	54.00	
	SCCmec Vb (AB512767.1)	87.80	62.40	SCCmec V (5C2&5)
	SCCmec Vb (AB478780.1)	87.50	62.50	
	SCCmec Vc (AB505629.1)	93.70	38.90	
	SCCmec V(T) (FJ544922.1)	94.70	72.50	
BI2004	SCCmec Va (AB121219.1)	79.90	49.10	
	SCCmec Vb (AB462393.1)	91.90	48.50	
	SCCmec Vb (AB512767.1)	92.30	56.00	SCCmec V (5C2&5)
	SCCmec Vb (AB478780.1)	92.70	54.20	
	SCCmec Vc (AB505629.1)	92.20	44.40	
	SCCmec V(T) (FJ544922.1)	93.50	82.90	
BI2008	SCCmec Va (AB121219.1)	90.60	37.90	
	SCCmec Vb (AB462393.1)	88.10	24.70	
	SCCmec Vb (AB512767.1)	87.30	30.30	SCCmec V (5C2)
	SCCmec Vb (AB478780.1)	88.10	28.60	
	SCCmec Vc (AB505629.1)	88.50	24.90	
	SCCmec V(T) (FJ544922.1)	75.70	55.80	
KY40511PPY30123	SCCmec Va (AB121219.1)	81.40	42.40	
	SCCmec Vb (AB462393.1)	86.50	54.60	
	SCCmec Vb (AB512767.1)	87.60	61.80	SCCmec V (5C2&5)
	SCCmec Vb (AB478780.1)	87.20	62.10	
	SCCmec Vc (AB505629.1)	90.50	42.30	
	SCCmec V(T) (FJ544922.1)	92.00	85.10	
LA70803PPY30016	SCCmec Va (AB121219.1)	70.90	28.90	
	SCCmec Vb (AB462393.1)	49.80	33.20	
	SCCmec Vb (AB512767.1)	50.10	38.10	SCCmec V (C52)
	SCCmec Vb (AB478780.1)	49.80	38.50	
	SCCmec Vc (AB505629.1)	50.00	34.10	
	SCCmec V(T) (FJ544922.1)	50.00	57.80	
MI48910PPY20187	SCCmec Va (AB121219.1)	87.10	37.70	
	SCCmec Vb (AB462393.1)	84.40	45.30	
	SCCmec Vb (AB512767.1)	84.90	51.80	SCCmec V (5C2&5)
	SCCmec Vb (AB478780.1)	84.60	52.20	
	SCCmec Vc (AB505629.1)	84.90	39.30	

	SCCmec V(T) (FJ544922.1)	86.20	74.10	
MO65211PPY31146	SCCmec Va (AB121219.1)	32.20	100.00	
	SCCmec Vb (AB462393.1)	45.60	100.00	
	SCCmec Vb (AB512767.1)	28.40	100.00	SCCmec V (5C2&5)
	SCCmec Vb (AB478780.1)	48.00	100.00	
	SCCmec Vc (AB505629.1)	45.40	100.00	
	SCCmec V(T) (FJ544922.1)	99.99	100.00	
TX77840PPY20121	SCCmec Va (AB121219.1)	84.90	70.00	
	SCCmec Vb (AB462393.1)	94.70	56.80	
	SCCmec Vb (AB512767.1)	95.40	65.70	SCCmec V (5C2&5)
	SCCmec Vb (AB478780.1)	94.80	65.80	
	SCCmec Vc (AB505629.1)	98.30	53.80	
	SCCmec V(T) (FJ544922.1)	99.98	80.20	
WI53706PPY30014	SCCmec Va (AB121219.1)	69.10	100.00	
	SCCmec Vb (AB462393.1)	46.30	99.50	
	SCCmec Vb (AB512767.1)	48.90	99.40	SCCmec V (5C2&5)
	SCCmec Vb (AB478780.1)	48.80	99.40	
	SCCmec Vc (AB505629.1)	48.50	100.00	
	SCCmec V(T) (FJ544922.1)	52.10	86.10	