

## Supporting materials

**article title:** Steroid Metabolism in Thermophilic Actinobacteria *Saccharopolyspora hirsuta* VKM Ac-666<sup>T</sup>

**journal name:** Microorganisms

**author names:** Tatyana Lobastova, Victoria Fokina, Sergey Tarlachkov, Andrey Shutov, Eugeny Bragin, Alexey Kazantsev, Marina Donova

**\*Correspondence:** 2vvfokina@gmail.com

**Supplementary Table S4.** List of homologous genes between *S. hirsuta* VKM Ac-666<sup>T</sup>, *R. jostii* RHA1, *M. tuberculosis* H37Rv.

No.	<i>S. hirsuta</i> VKM Ac-666		<i>R. jostii</i> RHA1		<i>M. tuberculosis</i> H37Rv	
	Gene	Protein acc.	Protein acc.	Identity, % a.a.	Protein acc.	Identity, % a.a.
1.	<i>mce4F</i>	KAA5825886.1	WP_011597044.1	<b>34.1</b>	CCP46316.1	<b>29.9</b>
2.	<i>mce4E</i>	KAA5825887.1	WP_011597043.1	<b>37.1</b>	CCP46317.1	<b>33.2</b>
3.	<i>mce4D</i>	KAA5825888.1	WP_011597042.1	<b>34.1</b>	CCP46318.1	<b>33.3</b>
4.	<i>mce4C</i>	KAA5825937.1	WP_011597041.1	<b>34.0</b>	CCP46319.1	<b>32.2</b>
5.	<i>mce4B</i>	KAA5825889.1	WP_011597040.1	<b>45.9</b>	CCP46320.1	<b>31.4</b>
6.	<i>mce4A</i>	KAA5825890.1	WP_009477765.1	<b>29.3</b>	CCP46321.1	<b>19.8</b>
7.	<i>yrbEb</i>	KAA5825891.1	WP_011597039.1	<b>48.4</b>	CCP46322.1	<b>48.8</b>

8.	<i>yrbEa</i>	KAA5825892.1	WP_009477764.1	<b>47.9</b>	CCP46323.1	<b>47.9</b>
9.	<i>fabG3</i>	KAA5825893.1	WP_011597603.1	<b>50.0</b>	CCP44774.1	<b>50.0</b>
10.	<i>hsd4A</i>	KAA5825895.1	WP_011597038.1	<b>58.8</b>	CCP46324.1	<b>59.9</b>
11.	<i>fadE26</i>	KAA5825896.1	WP_009477760.1	<b>75.0</b>	CCP46326.1	<b>71.7</b>
12.	<i>fadE27</i>	KAA5825897.1	WP_011597036.1	<b>63.2</b>	CCP46327.1	<b>52.2</b>
13.	<i>fadD17</i>	KAA5825898.1	WP_011597035.1	<b>60.7</b>	CCP46328.1	<b>53.9</b>
14.	<i>fadD19</i>	KAA5825902.1	WP_009477756.1	<b>60.5</b>	CCP46337.1	<b>57.9</b>
15.	<i>echA19</i>	KAA5825903.1	WP_011597033.1	<b>77.2</b>	CCP46338.1	<b>71.9</b>
16.	<i>ltp4</i>	KAA5825907.1	WP_009477751.1	<b>69.3</b>	CCP46344.1	<b>67.3</b>
17.	<i>ltp3</i>	KAA5825908.1	WP_009477750.1	<b>80.8</b>	CCP46345.1	<b>78.8</b>
18.	<i>ksdI</i>	KAA5825910.1	WP_011597028.1	<b>50.3</b>	-	-
19.	<i>cypI25</i>	KAA5825911.1	WP_009477746.1	<b>73.3</b>	CCP46367.1	<b>66.2</b>
20.	<i>fadA5</i>	KAA5825912.1	WP_011597025.1	<b>74.6</b>	CCP46368.1	<b>71.7</b>
21.	<i>hsaB</i>	KAA5825914.1	WP_005244804.1	<b>56.2</b>	CCP46390.1	<b>51.9</b>
22.	<i>hsaC</i>	KAA5825915.1	WP_011596919.1	<b>80.6</b>	CCP46391.1	<b>81.6</b>
23.	<i>hsaD</i>	KAA5825916.1	WP_011596918.1	<b>73.7</b>	CCP46392.1	<b>65.3</b>

24.	<i>hsaA</i>	KAA5825917.1	WP_011596917.1	<b>68.7</b>	CCP46393.1	<b>64.6</b>
25.	<i>hsaF</i>	KAA5825918.1	WP_009477596.1	<b>82.1</b>	CCP46356.1	<b>79.2</b>
26.	<i>hsaG</i>	KAA5825919.1	WP_009477595.1	<b>71.4</b>	CCP46357.1	<b>68.5</b>
27.	<i>hsaE</i>	KAA5825920.1	WP_009477594.1	<b>65.3</b>	CCP46358.1	<b>64.1</b>
28.	<i>kstD4</i>	KAA5825921.1	WP_011597824.1	<b>31.1</b>	CCP44583.1	<b>33.1</b>
29.	<i>kstD3</i>	KAA5825922.1	WP_011596914.1	<b>65.8</b>	CCP46359.1	<b>62.2</b>
30.	<i>kshA</i>	KAA5825923.1	WP_016884082.1	<b>69.8</b>	CCP46348.1	<b>61.6</b>
31.	<i>kshB</i>	KAA5825925.1	WP_011598098.1	<b>50.9</b>	CCP46394.1	<b>54.6</b>
32.	<i>ltp2</i>	KAA5825927.1	WP_011596878.1	<b>76.2</b>	CCP46362.1	<b>74.9</b>
33.	<i>chsH1</i>	KAA5825928.1	WP_011596877.1	<b>53.2</b>	CCP46363.1	<b>53.9</b>
34.	<i>chsH2</i>	KAA5825929.1	WP_011596876.1	<b>54.9</b>	CCP46364.1	<b>52.4</b>
35.	<i>fadE29</i>	KAA5825930.1	WP_011596875.1	<b>71.8</b>	CCP46365.1	<b>68.5</b>
36.	<i>fadE28</i>	KAA5825036.1	WP_011596874.1	<b>52.9</b>	CCP46366.1	<b>45.1</b>
37.	<i>kstR</i>	KAA5825025.1	WP_009477547.1	<b>63.9</b>	CCP46397.1	<b>60.4</b>
38.	<i>echA20</i>	KAA5825028.1	WP_007300903.1	<b>62.7</b>	CCP46372.1	<b>60.7</b>
39.	<i>ipdA</i>	KAA5825029.1	WP_011597005.1	<b>63.2</b>	CCP46373.1	<b>59.5</b>

40.	<i>ipdB</i>	KAA5825030.1	WP_011597004.1	<b>54.5</b>	CCP46374.1	<b>58.5</b>
41.	<i>ipdC</i>	KAA5825038.1	WP_011597003.1	<b>63.0</b>	CCP46375.1	<b>65.3</b>
42.	<i>kstR2</i>	KAA5825039.1	WP_009477673.1	<b>48.3</b>	CCP46379.1	<b>43.4</b>
43.	<i>ipdF</i>	KAA5825031.1	WP_011596964.1	<b>63.0</b>	CCP46381.1	<b>62.6</b>
44.	<i>fadE30</i>	KAA5825032.1	WP_009477671.1	<b>68.3</b>	CCP46382.1	<b>65.2</b>
45.	<i>echA13</i>	KAA5825033.1	WP_005254492.1	<b>72.9</b>	CCP44702.1	<b>41.5</b>
46.	<i>fadE31</i>	KAA5825040.1	WP_011596961.1	<b>70.9</b>	CCP46384.1	<b>62.8</b>
47.	<i>fadE32</i>	KAA5825034.1	WP_011596960.1	<b>48.5</b>	CCP46385.1	<b>43.9</b>
48.	<i>fadE33</i>	KAA5825035.1	WP_011596959.1	<b>46.8</b>	CCP46386.1	<b>38.4</b>
49.	<i>hsaE3</i>	KAA5838019.1	WP_011597907.1	<b>58.8</b>	-	-
50.	<i>hsaG3</i>	KAA5838020.1	WP_011599026.1	<b>75.0</b>	-	-
51.	<i>hsaF3</i>	KAA5838021.1	WP_011599025.1	<b>82.4</b>	-	-
52.	<i>casA</i>	KAA5838022.1	WP_011597920.1	<b>44.1</b>	-	-
53.	<i>hsaD3</i>	KAA5838023.1	WP_009479043.1	<b>71.5</b>	-	-
54.	<i>kstR3</i>	KAA5838439.1	WP_011597904.1	<b>59.9</b>	-	-
55.	<i>kstD2</i>	KAA5838025.1	WP_011599760.1	<b>64.9</b>	-	-

56.	<i>kstDI</i>	KAA5838026.1	WP_011597919.1	<b>51.2</b>	-	-
57.	<i>kshA</i>	KAA5838028.1	WP_050787406.1	<b>68.3</b>	-	-
58.	<i>kshB</i>	KAA5838030.1	WP_011597937.1	<b>50.3</b>	-	-
59.	<i>ksdI</i>	KAA5838031.1	WP_011599721.1	<b>56.1</b>	-	-
60.	<i>hsaB3</i>	KAA5838032.1	WP_011597905.1	<b>60.8</b>	-	-
61.	<i>hsaA3</i>	KAA5838033.1	WP_009479048.1	<b>56.6</b>	-	-
62.	<i>hsaC3</i>	KAA5838034.1	WP_011597910.1	<b>60.5</b>	-	-
63.	<i>fadD3</i>	KAA5826116.1	WP_011596962.1	<b>58.9</b>	CCP46383.1	<b>57.1</b>
64.	<i>fadA6</i>	KAA5824600.1	WP_011596965.1	<b>71.2</b>	CCP46378.1	<b>68.1</b>
65.	<i>choD</i>	KAA5833518.1	WP_011598180.1	<b>62.8</b>	CCP46231.1	<b>65.4</b>
66.	<i>choE</i>	KAA5835081.1	WP_011596408.1	<b>33.0</b>	-	-
67.	<i>kstR3</i>	KAA5828487.1	WP_011597904.1	<b>62.9</b>	-	-
68.	<i>casA</i>	KAA5828430.1	WP_011597920.1	<b>49.8</b>	-	-
69.	<i>casC/chsE3</i>	KAA5828431.1	WP_011597921.1	<b>63.6</b>	CCP43000.1	<b>46.0</b>
70.	<i>casE</i>	KAA5828432.1	WP_011597922.1	<b>60.5</b>	-	-
71.	<i>3<math>\alpha</math>-hsd</i>	KAA5828433.1	WP_011595206.1	<b>65.9</b>	-	-

72.	<i>casH</i>	KAA5828434.1	WP_011597925.1	<b>63.4</b>	CCP46180.1	<b>56.6</b>
73.	<i>casI</i>	KAA5828435.1	WP_011597926.1	<b>63.4</b>	-	-
74.	<i>casE</i>	KAA5838304.1	WP_011597922.1	<b>30.1</b>	-	-
75.	<i>casG</i>	KAA5838310.1	WP_011597924.1	<b>39.6</b>	-	-