

**Table S5:** Negatively selected sites for *Pvmsp-7* genes without taking recombination into account.

	<b>SLAC</b>	<b>FEL</b>	<b>REL</b>	<b>IFEL</b>
<i>m</i> sp-7 <i>C</i>	52, 71, 96, 103, 112, 125, 247 and 263	38, 52, 57, 65, 70, 71, 96, 97, 102, 103, 112, 122, 123, 125, 195, 225, 230, 247, 248, 254 and 263	38, 52, 57, 65, 70, 71, 96, 97, 102, 103, 112, 123, 195, 225, 230, 247, 248, 254 and 263	52, 71, 96, 97, 103, 112, 125, 195, 230, 247 and 263
<i>m</i> sp-7 <i>H</i>	25, 37, 44, 47, 69, 73, 75, 97, 101, 105, 129, 144, 146, 182, 204, 255 and 261	25, 37, 38, 44, 47, 56, 57, 69, 73, 75, 79, 85, 88, 91, 97, 101, 105, 106, 111, 122, 124, 129, 144, 146, 147, 182, 204, 253, 255, 261 and 296	25, 37, 38, 44, 47, 69, 73, 75, 79, 88, 91, 97, 101, 105, 106, 129, 144, 146, 147, 182, 204, 253, 255 and 296	25, 37, 38, 44, 47, 53, 57, 69, 73, 75, 79, 88, 97, 101, 105, 106, 129, 144, 146, 147, 182, 204, 253, 255, 261 and 296
<i>m</i> sp-7 <i>I</i>	14, 85, 111, 112, 127, 257, 265, 292, 302, 307, 358 and 359	14, 37, 47, 85, 87, 100, 111, 112, 127, 228, 257, 265, 292, 302, 307, 358 and 359	14, 37, 38, 47, 85, 87, 100, 111, 112, 127, 132, 153, 154, 155, 172, 191, 198, 212, 228, 234, 237, 246, 251, 257, 265, 292, 302, 307, 358 and 359	14, 37, 47, 85, 87, 100, 111, 112, 127, 153, 154, 228, 257, 265, 292, 302, 307, 358 and 359

Numbers according to the reference Sal-I protein sequence *Pvmsp-7C*: XP\_001614132.1, *Pvmsp-7H*: XP\_001614137.1 and *Pvmsp-7I*: XP\_001614138.1.