

Table S1. Strain list

Strain number	Description	Parent
PKY2160	<i>MATa; leu2-3, 112; ura3-1; his3-11,15; trp1-1; ade2-1; can1-100;</i> <i>cse4::kanMX; p_{cse4}-107-HA-URA3</i>	W303 background (Sharp et al. 2002).
PKY5394	+ pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY2160
PKY5230 (Wild-type)	+ pPK796 = (<i>CSE4 wild type, LEU2, CEN/ARS</i>) + pRS414 = (<i>TRP1, CEN/ARS</i>)	PKY2160
PKY5232 (Chimera)	+ pPK819 = (<i>cse4 (G196S, L198F, H200D, L204A, L206I, I224L), LEU2, CEN/ARS</i>) + pRS414 = (<i>TRP1, CEN/ARS</i>)	PKY2160
PKY5234 (X + Y)	+ pPK820 = (<i>cse4 (G196S, L198F, H200D, L204A, L206I, L220A, I224V), LEU2, CEN/ARS</i>) + pPK815 = (<i>cse4 (G196S, L198F, H200D, L203I, L204W, L206I), TRP1, CEN/ARS</i>)	PKY2160
PKY5470 (Wild-type)	+ pPK796 = (<i>CSE4 wild type, LEU2, CEN/ARS</i>) + pRS414 = (<i>TRP1, CEN/ARS</i>) + pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY5394
PKY5473 (Chimera)	+ pPK819 = (<i>cse4 (G196S, L198F, H200D, L204A, L206I, I224L), LEU2, CEN/ARS</i>) + pRS414 = (<i>TRP1, CEN/ARS</i>) + pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY5394
PKY5476 (X + Y)	+ pPK820 = (<i>cse4 (G196S, L198F, H200D, L204A, L206I, L220A, I224V), LEU2, CEN/ARS</i>) + pPK815 = (<i>cse4 (G196S, L198F, H200D, L203I, L204W, L206I), TRP1, CEN/ARS</i>) + pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY5394
PKY5485 ($\Delta 70X + Y$)	+ pPK948 = (<i>cse4 ($\Delta 1-70$, G196S, L198F, H200D, L204A, L206I, L220A, I224V), LEU2, CEN/ARS</i>) + pPK815 = (<i>cse4 (G196S, L198F, H200D, L203I, L204W, L206I), TRP1, CEN/ARS</i>) + pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY5394
PKY5488 (X + $\Delta 70Y$)	+ pPK820 = (<i>cse4 (G196S, L198F, H200D, L204A, L206I, L220A, I224V), LEU2, CEN/ARS</i>) + pPK949 = (<i>cse4 ($\Delta 1-70$, G196S, L198F, H200D, L203I, L204W, L206I), TRP1, CEN/ARS</i>) + pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY5394
PKY5491 (Cse4 ERS)	+ pPK957 = (<i>cse4 (Q227E, F228R, I229S), LEU2, CEN/ARS</i>) + pRS414 = (<i>TRP1, CEN/ARS</i>) + pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY5394
PKY5494 (Chimera ERS)	+ pPK953 = (<i>cse4 (G196S, L198F, H200D, L204A, L206I, I224L, Q227E, F228R, I229S), LEU2, CEN/ARS</i>) + pRS414 = (<i>TRP1, CEN/ARS</i>) + pRS413 = (<i>HIS3, CEN/ARS</i>)	PKY5394

PKY5497 (X ERS + Y)	+ pPK951 = (<i>cse4</i> (G196S, L198F, H200D, L204A, L206I, L220A, I224V, Q227E, F228R, I229S), LEU2, CEN/ARS) + pPK815 = (<i>cse4</i> (G196S, L198F, H200D, L203I, L204W, L206I), TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5500 (X + Y ERS)	+ pPK820 = (<i>cse4</i> (G196S, L198F, H200D, L204A, L206I, L220A, I224V), LEU2, CEN/ARS) + pPK952 = (<i>cse4</i> (G196S, L198F, H200D, L203I, L204W, L206I, Q227E, F228R, I229S), TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5503 (X ERS + Y ERS)	+ pPK951 = (<i>cse4</i> (G196S, L198F, H200D, L204A, L206I, L220A, I224V, Q227E, F228R, I229S), LEU2, CEN/ARS) + pPK952 = (<i>cse4</i> (G196S, L198F, H200D, L203I, L204W, L206I, Q227E, F228R, I229S), TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5506 (Cse4 L1-ERS)	+ pPK969 = (<i>cse4</i> (Δ 172-174, W178F, Q227E, F228R, I229S), LEU2, CEN/ARS) + pRS414 = (TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5509 (X L1-ERS + Y)	+ pPK966 = (<i>cse4</i> (Δ 172-174, W178F, G196S, L198F, H200D, L204A, L206I, L220A, I224V, Q227E, F228R, I229S), LEU2, CEN/ARS) + pPK815 = (<i>cse4</i> (G196S, L198F, H200D, L203I, L204W, L206I), TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5512 (X + Y L1-ERS)	+ pPK820 = (<i>cse4</i> (G196S, L198F, H200D, L204A, L206I, L220A, I224V), LEU2, CEN/ARS) + pPK967 = (<i>cse4</i> (Δ 172-174, W178F, G196S, L198F, H200D, L203I, L204W, L206I, Q227E, F228R, I229S), TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5515 (Δ 70X L1-ERS + Y)	+ pPK964 = (<i>cse4</i> (Δ 1-70, Δ 172-174, W178F, G196S, L198F, H200D, L204A, L206I, L220A, I224V, Q227E, F228R, I229S), LEU2, CEN/ARS) + pPK815 = (<i>cse4</i> (G196S, L198F, H200D, L203I, L204W, L206I), TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5518 (X + Δ 70Y L1-ERS)	+ pPK820 = (<i>cse4</i> (G196S, L198F, H200D, L204A, L206I, L220A, I224V), LEU2, CEN/ARS) + pPK965 = (<i>cse4</i> (Δ 1-70, Δ 172-174, W178F, G196S, L198F, H200D, L203I, L204W, L206I, Q227E, F228R, I229S), TRP1, CEN/ARS) + pRS413 = (HIS3, CEN/ARS)	PKY5394
PKY5521 (X L1-ERS)	+ pPK966 = (<i>cse4</i> (Δ 172-174, W178F, G196S, L198F, H200D, L204A, L206I, L220A, I224V, Q227E, F228R, I229S), LEU2, CEN/ARS)	PKY5394

+ Δ70Y)	<p>+ pPK949 = (<i>cse4</i> (Δ1-70, G196S, L198F, H200D, L203I, L204W, L206I), <i>TRP1</i>, <i>CEN/ARS</i>)</p> <p>+ pRS413 = (<i>HIS3</i>, <i>CEN/ARS</i>)</p>	
<p>PKY5524</p> <p>(Δ70X</p> <p>+ Y L1-ERS)</p>	<p>+ pPK948 = (<i>cse4</i> (Δ1-70, G196S, L198F, H200D, L204A, L206I, L220A, I224V), <i>LEU2</i>, <i>CEN/ARS</i>)</p> <p>+ pPK967 = (<i>cse4</i> (Δ172-174, W178F, G196S, L198F, H200D, L203I, L204W, L206I, Q227E, F228R, I229S), <i>TRP1</i>, <i>CEN/ARS</i>)</p> <p>+ pRS413 = (<i>HIS3</i>, <i>CEN/ARS</i>)</p>	PKY5394