

S4 Table. Rules for the prediction of ribosomal stalling strength induced by a $X_{(-2)}X_{(-1)}-nP-X_{(+1)}$ motif.

I. Rules for $n > 3$: all motifs are classified as strong					
II. Rules for $n = 3$: put the first proline at $X_{(-1)}$ position					
$X_{(-2)}$	$X_{(-1)}$		$X_{(+1)}$	motif strength	Example
strong	P	PP	strong	strong	KPPPD
strong	P	PP	medium	strong	KPPPK
strong	P	PP	weak	strong	KPPPC
$X_{(-2)}$	$X_{(-1)}$		$X_{(+1)}$	motif strength	Example
medium	P	PP	strong	strong	FPPPD
medium	P	PP	medium	medium	FPPPK
medium	P	PP	weak	medium	FPPPC
$X_{(-2)}$	$X_{(-1)}$		$X_{(+1)}$	motif strength	Example
weak	P	PP	strong	strong	SPPPD
weak	P	PP	medium	medium	SPPPK
weak	P	PP	weak	weak	SPPPC
III. Rules for $n = 2$					
If $X_{(+1)} = \text{strong}$, classify $X_{(-1)}$ using the rule for $X_{(-2)}$			$X_{(+1)}$	motif strength	Example
	strong	PP	strong	strong	KPPD
	medium	PP	strong	medium	FPPD
	weak	PP	strong	weak	SPPD
$X_{(-2)}$	$X_{(-1)}$		$X_{(+1)}$	motif strength	Example
strong	strong	PP	medium	strong	KGPPK
strong	medium	PP	medium	medium	KEPPK
medium	strong	PP	medium	medium	FGPPK
medium	medium	PP	medium	medium	FEPPK
If $X_{(+1)} = \text{medium}$ and $X_{(-2)}$ or $X_{(-1)} = \text{weak}$, classify $X_{(-1)}$ using the rule for $X_{(-2)}$			$X_{(+1)}$	motif strength	Example
	strong	PP	medium	medium	TIPPK
	medium	PP	medium	medium	AFPPK
	weak	PP	medium	weak	ACPPK
$X_{(-2)}$	$X_{(-1)}$		$X_{(+1)}$	motif strength	Example
strong	strong	PP	weak	strong	KGPPC
strong	medium	PP	weak	medium	KEPPC
strong	weak	PP	weak	weak	KCPPC
medium	strong	PP	weak	medium	FGPPC
medium	medium	PP	weak	medium	FEPPC
medium	weak	PP	weak	weak	FCPPC
weak	strong	PP	weak	weak	SGPPC
weak	medium	PP	weak	weak	SEPPC
weak	weak	PP	weak	weak	SCPPC