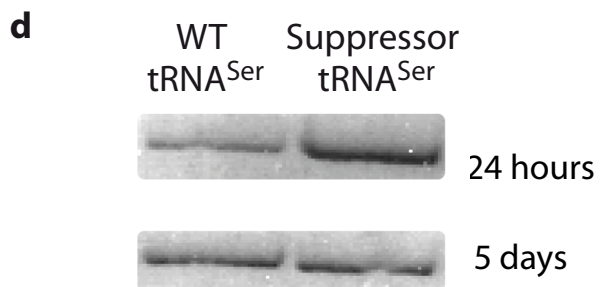
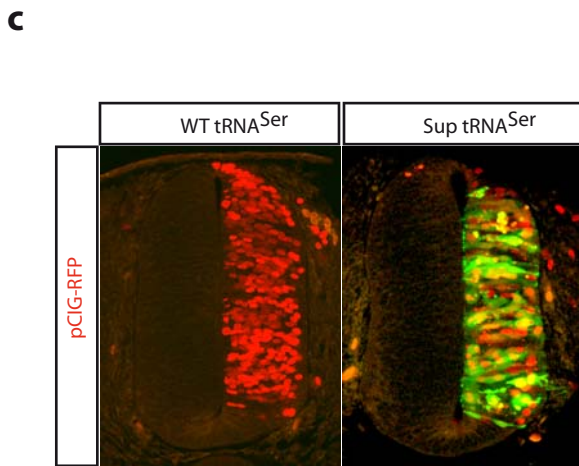
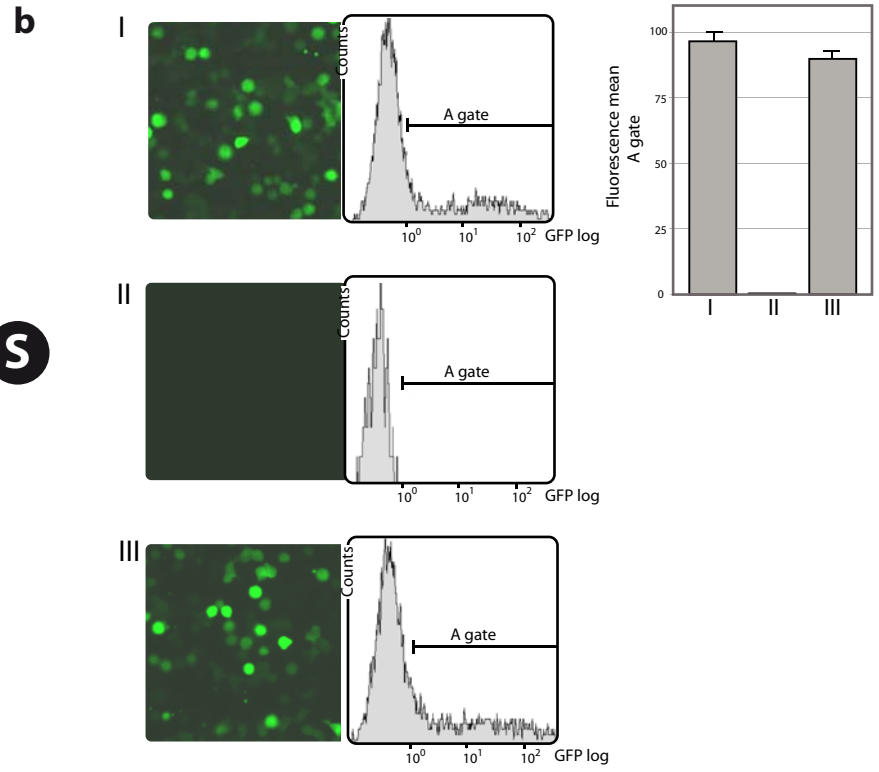
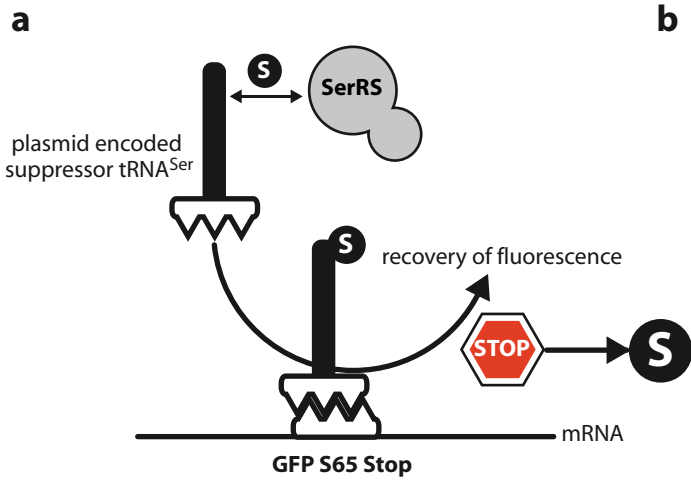
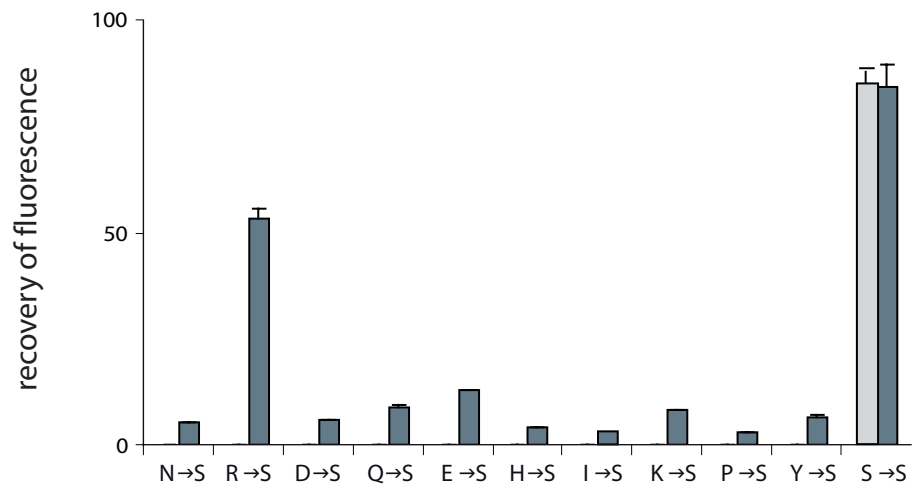


Geslain\_Supplementary Figure 1

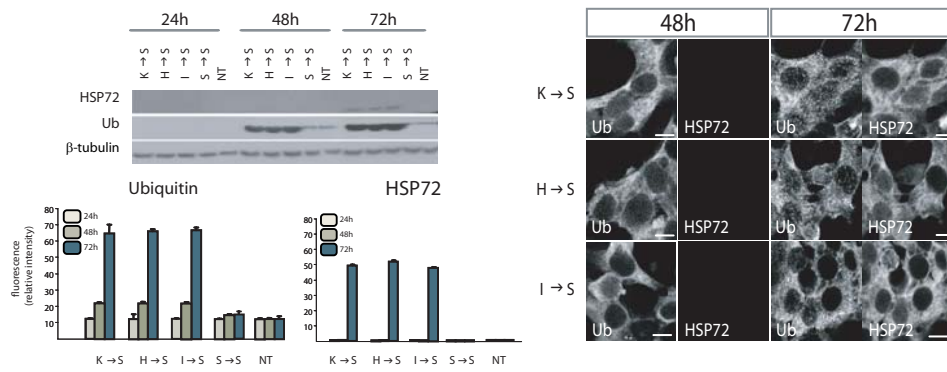


Geslain\_Supplementary Figure 2

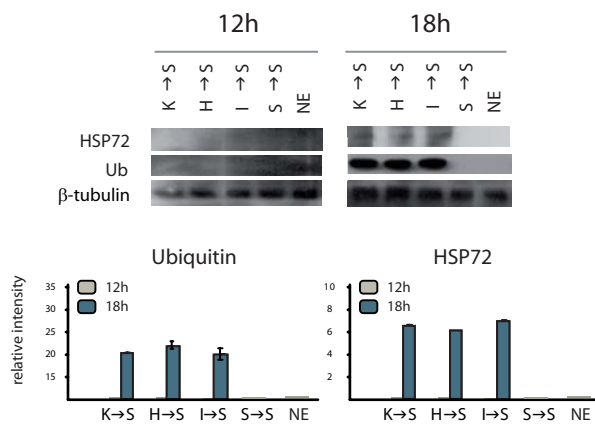


# Geslain\_Supplementary Figure 3

a



b



Supplementary Table 1

mutation	codon recognized	chimeric tRNA
A - S	GCA	tRNA <sup>Ser</sup> <sub>UGC</sub> (Ala)
C - S	TGT	tRNA <sup>Ser</sup> <sub>ACA</sub> (Cys)
D - S	GAC	tRNA <sup>Ser</sup> <sub>GUC</sub> (Asp)
E - S	GAG	tRNA <sup>Ser</sup> <sub>CUC</sub> (Glu)
F - S	TTT	tRNA <sup>Ser</sup> <sub>AAA</sub> (Phe)
G - S	GGA	tRNA <sup>Ser</sup> <sub>UCC</sub> (Gly)
H - S	CAT	tRNA <sup>Ser</sup> <sub>AUG</sub> (His)
I - S	ATT	tRNA <sup>Ser</sup> <sub>AAU</sub> (Ile)
K - S	AAG	tRNA <sup>Ser</sup> <sub>CUU</sub> (Lys)
L - S	TTG	tRNA <sup>Ser</sup> <sub>CAA</sub> (Leu)
N - S	AAC	tRNA <sup>Ser</sup> <sub>GUU</sub> (Asn)
P - S	CCT	tRNA <sup>Ser</sup> <sub>AGG</sub> (Pro)
Q - S	GAG	tRNA <sup>Ser</sup> <sub>CUC</sub> (Gln)
R - S	CGA	tRNA <sup>Ser</sup> <sub>UCG</sub> (Arg)
T - S	ACT	tRNA <sup>Ser</sup> <sub>AGU</sub> (Thr)
V - S	GTT	tRNA <sup>Ser</sup> <sub>AAC</sub> (Val)
Y - S	TAT	tRNA <sup>Ser</sup> <sub>AUA</sub> (Tyr)

Supplementary Table 2

	<b>overall percentatge of substitutions</b>	<b>Ile frequency</b>
<b>ER</b>	<b>59.7 %</b>	<b>6.3%</b>
<b>NUCLEUS</b>	<b>61.7%</b>	<b>5.9%</b>
<b>MITOCHONDRIA</b>	<b>58.4%</b>	<b>6.6%</b>
<b>CYTOPLASM</b>	<b>61.1%</b>	<b>6.2%</b>