

S2 Table. Description of the analyzed genotypes

Fig 1A	<p>F1 progeny was analyzed obtained from crosses of w^1 virgin females with males of the following genotypes:</p> <p>control: $w^1 / B^S Y y^+$</p> <p><i>mnm</i>: $w^* / B^S Y y^+; + / +; mnm^{Z3-3298} / mnm^{Z3-5578}$</p> <p><i>mnm (e+)</i>: $w^* / B^S Y y^+; UAS\textit{t-mnm-EGFP II.2} / +; bamP-GAL4-VP16, mnm^{Z3-3298} / mnm^{Z3-5578}$</p> <p><i>snm</i>: $w^* / B^S Y y^+; + / +; snm^{Z3-0317} / snm^{Z3-2138}$</p> <p><i>snm (e+)</i>: $w^* / B^S Y y^+; UAS\textit{t-snm-EGFP II.1} / +; bamP-GAL4-VP16, snm^{Z3-0317} / snm^{Z3-2138}$</p>
Fig 1B	<p>control: $w^* / Y; + / +; bamP-GAL4-VP16 / +$</p>
Fig 1C,D	<p>control: w^1 / Y</p> <p><i>mnm (e+)</i>: $w^* / Y; UAS\textit{t-mnm-EGFP II.2} / +; bamP-GAL4-VP16, mnm^{Z3-3298} / mnm^{Z3-5578}$</p> <p><i>snm (e+)</i>: $w^* / Y; UAS\textit{t-snm-EGFP II.2} / +; bamP-GAL4-VP16, snm^{Z3-0317} / snm^{Z3-2138}$</p>
Fig 2	<p>control: w^1 / Y</p> <p><i>mnm</i>: $w^* / Y; + / +; bamP-GAL4-VP16, mnm^{Z3-3298} / mnm^{Z3-5578}$</p> <p><i>mnm (e)</i>: $w^* / Y; UAS\textit{t-mnm-EGFP II.1, betaTub85DP-Nslmb-vhhGFP4} / +; bamP-GAL4-VP16, mnm^{Z3-3298} / mnm^{Z3-5578}$</p> <p><i>mnm (e+)</i>: $w^* / Y; UAS\textit{t-mnm-EGFP II.2} / +; bamP-GAL4-VP16, mnm^{Z3-3298} / mnm^{Z3-5578}$</p>
Fig 3	<p>control: w^1 / Y</p> <p><i>snm</i>: $w^* / Y; + / +; bamP-GAL4-VP16, snm^{Z3-0317} / snm^{Z3-2138}$</p> <p><i>snm (e)</i>: $w^* / Y; UAS\textit{t-snm-EGFP II.2, betaTub85DP-Nslmb-vhhGFP4} / +; bamP-GAL4-VP16, snm^{Z3-0317} / snm^{Z3-2138}$</p> <p><i>snm (e+)</i>: $w^* / Y; UAS\textit{t-snm-EGFP II.2} / +; bamP-GAL4-VP16, snm^{Z3-0317} / snm^{Z3-2138}$</p>

Fig 4A-D	<p>control: w^1 / Y</p> <p>mnm: w^* / Y; $+/ +$; $bamP$-GAL4-VP16, $mnm^{Z3-3298} / mnm^{Z3-5578}$</p> <p>$mnm$ ($e+l$): w^* / Y; UAS-mnm-EGFP II.2/ $+/ +$; $bamP$-GAL4-VP16, $mnm^{Z3-3298} / mnm^{Z3-5578}$</p> <p>$mnm$ (l): w^* / Y; βTub85DP-mnm-EGFP/ $+/ +$; $mnm^{Z3-3298} / mnm^{Z3-5578}$</p>
Fig 4E-G	<p>mnm (l): w^* / Y; βTub85DP-mnm-EGFP/ His2Av-$mRFP$ II.2, $gCid$-EGFP-Cid II.1; $mnm^{Z3-3298} / mnm^{Z3-5578}$</p>
Fig 5	<p>control: w^1 / Y</p> <p>snm: w^* / Y; $+/ +$; $bamP$-GAL4-VP16, $snm^{Z3-0317} / snm^{Z3-2138}$</p> <p>$snm$ ($e+l$): w^* / Y; UAS-snm-EGFP II.2/ $+/ +$; $bamP$-GAL4-VP16, $snm^{Z3-0317} / snm^{Z3-2138}$</p> <p>$snm$ (l): w^* / Y; βTub85DP-snm-EGFP/ $+/ +$; $snm^{Z3-0317} / snm^{Z3-2138}$</p> <p>$\beta$Tub85DP-$snm$-EGFP: w^* / Y; βTub85DP-snm-EGFP/ CyO; $snm^{Z3-0317} / TM6B$</p>
Fig 6A-C	<p>snm: w^* / Y; $+/ +$; $bamP$-GAL4-VP16, $snm^{Z3-0317} / snm^{Z3-2138}$</p> <p>$snm$ (l): w^* / Y; βTub85DP-snm-EGFP/ $+/ +$; $snm^{Z3-0317} / snm^{Z3-2138}$</p> <p>$snm$ (l_m): w^* / Y; βTub85DP-mnm-EGFP/ $+/ +$; $snm^{Z3-0317} / snm^{Z3-2138}$</p> <p>$snm$ (l_{s+m}): w^* / Y; βTub85DP-snm-EGFP/ βTub85DP-mnm-EGFP; $snm^{Z3-0317} / snm^{Z3-2138}$</p>

Fig 6D,E	<p>control: w^1/Y</p> <p><i>mnm</i>: w^*/Y; $+/+$; <i>bamP-GAL4-VP16</i>, <i>mnm</i>^{Z3-3298} / <i>mnm</i>^{Z3-5578}</p> <p><i>mnm (e+)</i>: w^*/Y; <i>UASt-mnm-EGFP II.2/+</i>; <i>bamP-GAL4-VP16</i>, <i>mnm</i>^{Z3-3298} / <i>mnm</i>^{Z3-5578}</p> <p><i>mnm (e)</i>: w^*/Y; <i>UASt-mnm-EGFP II.1</i>, <i>betaTub85DP-Nslmb-vhhGFP4/+</i>; <i>bamP-GAL4-VP16</i>, <i>mnm</i>^{Z3-3298} / <i>mnm</i>^{Z3-5578}</p> <p><i>mnm (l)</i>: w^*/Y; <i>betaTub85DP-mnm-EGFP/+</i>; <i>mnm</i>^{Z3-3298} / <i>mnm</i>^{Z3-5578}</p> <p><i>snm</i>: w^*/Y; $+/+$; <i>bamP-GAL4-VP16</i>, <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p> <p><i>snm (e+)</i>: w^*/Y; <i>UASt-snm-EGFP II.2/+</i>; <i>bamP-GAL4-VP16</i>, <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p> <p><i>snm (e)</i>: w^*/Y; <i>UASt-snm-EGFP II.2</i>, <i>betaTub85DP-Nslmb-vhhGFP4/+</i>; <i>bamP-GAL4-VP16</i>, <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p> <p><i>snm (l)</i>: w^*/Y; <i>betaTub85DP-snm-EGFP/+</i>; <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p> <p><i>snm (l_s+m)</i>: w^*/Y; <i>betaTub85DP-snm-EGFP/betaTub85DP-mnm-EGFP</i>; <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p>
S1 Fig	<p>control: w^1/Y</p> <p><i>snm</i>: w^*/Y; $+/+$; <i>bamP-GAL4-VP16</i>, <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p> <p><i>snm (e)</i>: w^*/Y; <i>UASt-snm-EGFP II.2</i>, <i>betaTub85DP-Nslmb-vhhGFP4/+</i>; <i>bamP-GAL4-VP16</i>, <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p> <p><i>snm (l)</i>: w^*/Y; <i>betaTub85DP-snm-EGFP/+</i>; <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p> <p><i>bam>mnm-EGFP in snm+/-</i>: w^*/Y; <i>UASt-mnm-EGFP II.2/+</i>; <i>bamP-GAL4-VP16</i>, <i>snm</i>^{Z3-0317} / TM3, Ser</p> <p><i>bam>mnm-EGFP in snm-/-</i>: w^*/Y; <i>UASt-mnm-EGFP II.2/+</i>; <i>bamP-GAL4-VP16</i>, <i>snm</i>^{Z3-0317} / <i>snm</i>^{Z3-2138}</p>
S2 Fig	see Fig 6D,E
S1 Movie	see Fig 4E-G
S2 Movie	