

Supplementary Material

Lamin B1 curtails early human papillomavirus infection by safeguarding nuclear compartmentalization and autophagic capacity

Freya Molenberghs¹, Marlies Verschuuren¹, Laurant Vandeweyer¹, Sarah Peeters¹, Johannes J. Bogers¹, Claudina Perez Novo², Wim Vanden Berghe², Hans De Reu³, Nathalie Cools³, Mario Schelhaas⁴, Winnok H. De Vos^{1*}

¹ Laboratory of Cell Biology and Histology, Department of Veterinary Sciences and Health Sciences, University of Antwerp, Belgium

² Laboratory of Protein Chemistry, Proteomics and Epigenetic Signaling (PPES), Department of Biomedical Sciences, University of Antwerp, Belgium

³ Laboratory of Experimental Hematology, Faculty Medicine and Health Sciences, University of Antwerp, Belgium

⁴ Institute of Cellular Virology, University of Münster, Germany

Contact information:

*Corresponding author:

University of Antwerp

Laboratory of Cell Biology and Histology

Universiteitsplein 1, 2610 Antwerp, Belgium

e-mail: winnok.devos@uantwerpen.be

24 **Supplementary Table 1** Overview p values of all statistical comparisons shown in the figures.

Fig. 1d	x	y	p value	Sign.		x	y	p value	Sign.
Nuclear circ.	CTRLko	LMNAko	<1 ^e -10	***	Mean lamin A/C int.	CTRLko	LMNAko	<1 ^e -10	***
	CTRLko	LMNB1ko	<1 ^e -10	***		CTRLko	LMNB1ko	<1 ^e -10	***
	CTRLko	LMNB2ko	<1 ^e -10	***		CTRLko	LMNB2ko	<1 ^e -10	***
	LMNAko	LMNB1ko	<1 ^e -10	***		LMNAko	LMNB1ko	<1 ^e -10	***
	LMNAko	LMNB2ko	<1 ^e -10	***		LMNAko	LMNB2ko	<1 ^e -10	***
	LMNB1ko	LMNB2ko	<1 ^e -10	***		LMNB1ko	LMNB2ko	<1 ^e -10	***
Fig. 2a	x	y	p value	Sign.		x	y	p value	Sign.
Infection rate	CTRLkd	LMNAkd	0.99913	n.s.	Mean EGFP int.	CTRLkd	LMNAkd	0.98887	n.s.
	CTRLkd	LMNB1kd	<0.001	***		CTRLkd	LMNB1kd	<0.001	***
	CTRLkd	LMNB2kd	0.99801	n.s.		CTRLkd	LMNB2kd	0.99070	n.s.
Infection rate	CTRLko	LMNAko	0.166	n.s.	Mean EGFP int.	CTRLko	LMNAko	0.1182	n.s.
	CTRLko	LMNB1ko	<0.001	***		CTRLko	LMNB1ko	<0.001	***
	CTRLko	LMNB2ko	0.989	n.s.		CTRLko	LMNB2ko	1.000	n.s.
Fig. 3a	x	y	p value	Sign.		x	y	p value	Sign.
Doubling time kd	CTRLkd	LMNAkd	0.94	n.s.	Doubling time ko	CTRLko	LMNAko	0.88	n.s.
	CTRLkd	LMNB1kd	0.94	n.s.		CTRLko	LMNB1ko	0.88	n.s.
	CTRLkd	LMNB2kd	0.94	n.s.		CTRLko	LMNB2ko	0.88	n.s.
Fig. 3c	x	y	p value	Sign.	Fig. 3d	x	y	p value	Sign.
Mitotic window	CTRLko	LMNB1ko	9.271 ^e -07	***	EdU spots	CTRLko	LMNB1ko	0.04677	*
Fig. 3e	x	y	p value	Sign.		x	y	p value	Sign.
Fraction cells with ruptures	CTRLko	LMNAko	0.193	n.s.	Rate rerupture	CTRLko	LMNAko	0.921	n.s.
	CTRLko	LMNB1ko	<0.001	***		CTRLko	LMNB1ko	<1 ^e -05	***
	CTRLko	LMNB2ko	1.000	n.s.		CTRLko	LMNB2ko	1.000	n.s.
Fig. 3f	x	y	p value	Sign.					
EdU spots	CTRLko	LMNB1ko	0.002381	**					
Fig. 4b	x	y	p value	Sign.		x	y	p value	Sign.
+HPV PsV	CTRLko	LMNB1ko	0.334	n.s.	EGFP+	CTRLko	LMNB1ko	0.667	n.s.
Fig. 5a	x	y	p value	Sign.		x	y	p value	Sign.
-HPV/ +HPV PsV	CTRLko	LMNB1ko	0.00479	**	EGFP-/ EGFP+	CTRLko	LMNB1ko	0.234	n.s.
	- HPV	+HPV	0.4271	n.s.		EGFP-	EGFP+	0.645	n.s.
Fig. 6a	x	y	p value	Sign.		x	y	p value	Sign.
-HPV/ +HPV PsV	CTRLko	LMNB1ko	<2 ^e -16	***	EGFP-/ EGFP+	CTRLko	LMNB1ko	2.6 ^e -12	***
	- HPV	+HPV	0.15	n.s.		EGFP-	EGFP+	2 ^e -16	***
Fig. 6b	x	y	p value	Sign.		x	y	p value	Sign.
24h	CTRLko	CTRLko	1.000	n.s.	48h	CTRLko	CTRLko	0.31976	n.s.
	CTRLkd	PMLkd				CTRLkd	PMLkd		
	CTRLko	LMNB1ko	0.01240	*		CTRLko	LMNB1ko	<0.001	***
	CTRLkd	CTRLkd				CTRLkd	CTRLkd		

	CTRLko CTRLkd	LMNB1ko PMLkd	0.99638	n.s.		CTRLko CTRLkd	LMNB1ko PMLkd	0.94222	n.s.
	CTRLko PMLkd	LMNB1ko CTRLkd	0.00666	**		CTRLko PMLkd	LMNB1ko CTRLkd	<0.001	***
	CTRLko PMLkd	LMNB1ko PMLkd	0.98656	n.s.		CTRLko PMLkd	LMNB1ko PMLkd	0.01488	*
	LMNB1ko CTRLkd	LMNB1ko PMLkd	0.11160	n.s.		LMNB1ko CTRLkd	LMNB1ko PMLkd	<0.001	***
Fig. 7a	x	y	p value	Sign.					
Prot. degr.	DMSO	MG132	<2 ^e -16	***					
Fig. 7b	x	y	p value	Sign.					
DMSO	CTRLko HPV PsV-	CTRLko HPV PsV+	0.5669	n.s.	RAPA/ CHLOR	CTRLko HPV PsV-	CTRLko HPV PsV+	0.869	n.s.
	LMNB1ko HPV PsV-	LMNB1ko HPV PsV+	0.0147	*		LMNB1ko HPV PsV-	LMNB1ko HPV PsV+	0.960	n.s.
	CTRLko HPV-	LMNB1ko HPV PsV-	0.9982	n.s.		CTRLko HPV-	LMNB1ko HPV PsV-	<1 ^e -05	***
	CTRLko HPV PsV+	LMNB1ko HPV PsV+	0.4210	n.s.		CTRLko HPV PsV+	LMNB1ko HPV PsV+	<1 ^e -05	***
Fig. 8c	x	y	p value	Sign.		x	y	p value	Sign.
-HPV/ +HPV PsV	CTRLko	LMNB1ko	0.516	n.s.	EGFP- /EGFP+	CTRLko	LMNB1ko	0.847	n.s.
	-HPV	+HPV	0.124	n.s.		EGFP-	EGFP+	<2 ^e -16	***
Fig. 8d	x	y	p value	Sign.		x	y	p value	Sign.
-HPV/ +HPV PsV	CTRLko	LMNB1ko	0.0238	*	EGFP- /EGFP+	CTRLko	LMNB1ko	0.0231	*
	-HPV	+HPV	0.00814	**		EGFP-	EGFP+	<2 ^e -16	***