

## Supplementary Material

### Development of an *in vivo* murine model of perineural invasion and spread of cutaneous squamous cell carcinoma of the head and neck

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**Table 1:** Key reagents and resources.

Reagent type or resource	Source	Identifiers	Additional information	
Organisms/ Strains	BALB/c <i>Foxn1</i> <sup>nu</sup> mice (A/A <i>Tyrp1</i> <sup>b</sup> / <i>Tyrp1</i> <sup>b</sup> <i>Tyr</i> <sup>c</sup> / <i>Tyr</i> <sup>c</sup> , MHC haplotype (H2K <sup>d</sup> ) and C5 normal	Animal Resource Centre	Product code: BCNU; RRID:MGI:565 2590	Sex: Males.
	NSG-HLA-A2.1 mice (NOD.Cg- <i>Mcph1</i> <sup>Tg(HLA-A2.1)</sup> <i>EngE Prkdc</i> <sup>scid</sup> <i>Il2rg</i> <sup>t</sup> <i>m1Wjl/SzJ</i> )	Radford laboratory (Mater Medical Research) originally sourced from the Jackson Laboratory	Stock#009617; RRID:IMSR_JA X:009617	Sex: Males and females were used.
Cell lines	A431	ATCC	Cat#CRL-1555; RRID:CVCL_0 037	
	A431-Luc2 and A431- Luc2-shLOXL2	Prof. Glen Boyle (Simmons, Pierce, Al-Ejeh, & Boyle, 2017) DOI:10.1038/s415 98-017-11366-y		

Antibodies	Rabbit monoclonal anti-human LOXL2 (EPR12733)	Abcam	Cat#ab179810	WB (1:1000)
	Rabbit monoclonal anti- $\beta$ -actin	Cell Signaling Technologies (CST)	Cat#4970; RRID:AB_2223172	WB (1:2000)
	Mouse anti-human pan cytokeratin (clone AE1/AE3)	Agilent DAKO	Cat#M3515/M351529; RRID:AB_2132885	IHC (1:300) Dual IHC (1:250)
	Rabbit polyclonal anti-S100	Leica Biosystems	Cat#NCL-L-S100p; RRID:AB_564003	IHC (1:160) Dual IHC (1:250)
	Goat polyclonal anti-rabbit IgG	Cell Signaling Technologies (CST)	Cat#7074; RRID:AB_2099233	No dilution required. Ready to use
	MACH2 goat anti-rabbit HRP	Biocare Medical	Cat#RHP520	No dilution required. Ready to use
	MACH2 goat anti-mouse HRP	Biocare Medical	Cat#MHRP520	No dilution required. Ready to use
Recombinant DNA	pLENTI6/TR	Invitrogen	Cat#K4965-00	
	pLENTI4/TO/V5-DEST	Invitrogen	Cat#K4965-00	
	shLOXL2 sequences cloned into pcDNA6.2-GW-EmGFP	Invitrogen.	Hmi409846_top_LOXL2; Hmi409846_bot_LOXL2; Hmi409847_top_LOXL2;	Transduced into A431 cells.

HMI409847_bot _LOXL2				
pLENTI6/luciferase	Glen Boyle (Simmons, Pierce, Al-Ejeh, & Boyle, 2017)  DOI:10.1038/s415 98-017-11366-y		A431 cells were transduced with lentivirus containing pLENTI6/luc iferase.	
Commercial assay or kit	MACH1 Universal anti-rabbit HRP- Polymer Detection	Biocare Medical	Cat#M1U539	
Chemical compound or drugs	Ketamine	Clifford Hallam Healthcare	Cat#1880206;  CAS ID: 6740- 88-1	Administered dose: 100 mg/kg.
	Xylazil-20 (Xylazine)	Clifford Hallam Healthcare	Cat#1945536;  CAS ID: 7361- 61-7	Administered dose: 10 mg/kg.
	Buprenorphine	Clifford Hallam Healthcare	Cat#1238366; CAS ID: 52485- 79-7	Administered dose: 0.05 mg/kg
	Carprofen (Rimadyl)	Zoetis	Cat#10001132; CAS ID: 53716- 49-7	Administered dose: 5 mg/kg
	D-luciferin potassium salt	Gold Biotechnology	Cat#LUCK; CAS ID: 115144-35-9	Stock: 15 mg/mL. Final concentration / well: 150 µg/ml.
	10% Neutral buffered formalin	Australian Biostain	Cat#ANBFB.5; CAS ID: 50-00- 0	

	Vector ImmPACT DAB HRP chromogen (Brown)	Abacus ALS	Cat#VESK4105
	Vector ImmPACT DAB HRP chromogen (Purple)	Abacus ALS	Cat#VESK4605
	Peroxidazed 1	Biocare Medical	Cat#PX968M
	Background Sniper	Biocare Medical	Cat#BS966
	Da Vinci Green antibody diluent	Biocare Medical	Cat#PD900
	Mouse on Mouse (M.O.M.) Blocking Reagent-Rodent Block M	Biocare Medical	Cat#RBM961L
Software and algorithms	ImageJ	[40] DOI:10.1038/nmet h.2089	<a href="https://imagej.nih.gov/ij/">https://imagej.nih.gov/ij/</a> ; RRID:SCR_003 070
	Fiji (Image J)	[41] DOI:10.1038/nmet h.2019	<a href="https://fiji.sc/">https://fiji.sc/</a> RRID:SCR_002 285
	PRISM V7 and V8	GraphPad software	<a href="https://www.graphpad.com/">https://www.graphpad.com/</a> ; RRID:SCR_002 798
	Aperio ImageScope	Leica Biosystems	<a href="https://www.leicabiosystems.com/digital-pathology/mana">https://www.leicabiosystems.com/digital-pathology/mana</a>

			ge/aperio-imagescope/ RRID:SCR_020993
	OlyVia	Olympus Life Sciences	<a href="https://www.olympus-lifescience.com/en/support/downloads/#!dlOpen=%23detail847249644">https://www.olympus-lifescience.com/en/support/downloads/#!dlOpen=%23detail847249644</a> RRID:SCR_016167
	Living Image	Perkin Elmer	<a href="https://www.perkinelmer.com/uk/Product/life-software-for-lumina-1-seat-add-on-128110">https://www.perkinelmer.com/uk/Product/life-software-for-lumina-1-seat-add-on-128110</a> RRID:SCR_014247
Other	DAPI	Sigma-Aldrich	Cat#D9542-10MG; CAS ID: 28718-90-3
	DMEM-F12	Life Technologies, Gibco	Cat#11320033
	RPMI-1640	Life Technologies, Gibco	Cat#31800089
	Dulbecco's PBS	Life Technologies, Gibco	Cat#14190-144
	HEPES	Life Technologies, Gibco	Cat#15630080
	L-Glutamine	Life Technologies, Gibco	Cat#25030081

Penicillin-Streptomycin	Life Technologies, Gibco	Cat#15140122; CAS ID: 3810- 74-0 and 69-57- 8	
Cautery pen Gemini, tip length 5 mm	Able Scientific	Cat#ASCCK- 1700/ ASCC- 1065	
Dermabond Advanced Topical Skin Adhesive	Ethicon, Johnson & Johnson	Product Code: ANX12	
Povidone-Iodine Prep pads	Medical Industries	Cat#LML-08	
Bepanthen® antiseptic cream	Bayer Pharmaceutics	AUST-R 182923	
DietGel boost	Clear H <sub>2</sub> O	Cat#72-04-5022	
10 µL Hamilton syringe (model 701RN)	Hamilton	Cat#7635-01	
30 Gauge, small hub RN needle	Hamilton	Cat#HAMC780 3-07	Needle length: 10mm, point style: 4, bevel: 45
Vannas-type micro scissors, straight 80- 82mm	ProSciTech	Cat#TY-3001 or #PEL1346	
Pointed tweezers, style 5.	ProSciTech	Cat#T65-SS	
Curved Dumont Dumostar tweezer, style 7	TED PELLA, Proscitech	Cat#527	
6-0 Vicryl rapide suture	Ethicon	Cat#W9913	

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Tissue Plus O.C.T. Compound	Scigen	Cat#4586
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Disposable base mold 37x24x5mm	VWR	Cat#SIMP475 -5
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