Supplementary Files

Table S1: Description of the sampled locations of *M. trossulus* references (PopRef) and *M. edulis* and *M. galloprovincialis* individuals (PopEu). Pop: population name; N: number of individuals sampled; Lat: latitude; Long: longitude; MtrBTN1: number of individuals with MtrBTN1 tumor; MtrBTN2: number of individuals with MtrBTN2, the tumor detected in this study; DNB: number of individuals with disseminated neoplasia type B (non-transmissible cancer).

PopRef	N	Locality	Lat	Long	Collection_date	MtrBTN1
MtrossCB, MW	**7**	Copper Beach, West Vancouver, British Columbia, Canada	49.378056	-123.278889		**2**
StLau-TD, CBD	**19**	Saint Lawrence, Cap de Bon Désir, Canada	48.269414	-69.466146	2010	
Gdansk	**8**	Gulf of Gdansk, Poland	54.609556	18.527944	23-Aug-2012	

PopEu	N	Locality	Lat	Long	Collection_date	MtrBTN2	DNB
Aig	**12**	Baie de l'Aiguillon, France	46.22779	-1.176385	03-Apr-2017		
AIX_001	**20**	Ile d'Aix, France	46.04045	-1.205566667	30-Nov-2016		
AR	**21**	Ares, Galicia, Spain	43.418517	-8.240612			
Arc	**74**	Arcachon la Vigne, France	44.67145	-1.238366	28-Nov-2016	**1**	
AUN_001	**21**	Rocher d'Aunis, France	46.33305	-1.4268	07-Nov-2016	**2**	
B_amont	**14**	Bassin Amont, Le Havre, France	49.47124	0.14587			
B_aval	**15**	Bassin Aval, Le Havre, France	49.47447	0.13242			
Barf	**29**	Barfleur, France	49.71015	-1.258066667	2015	**1**	
BD	**72**	Bude, SW England, UK	50.831278	-4.557036			
BDC	**30**	Bois-de-Cise, France	50.0906	1.422817	2016		
BER	**30**	Berck, France	50.429867	1.559517	2016		
BES	**29**	Port en Bessin, France	49.351067	-0.753603	2016		
BIA_001	**45**	Digue de Marbella, Biarritz, France	43.467448	-1.576547	14-Dec-2016		
BIL_001	**21**	Le Bile - Penestin, France	47.445281	-2.490151	11-Jan-2017		
BIL1	**10**	Zierbena, Bilbao harbor, Spain	43.35194	-3.081244	17-Jul-2017		
BIL2	**5**	Zierbena, Bilbao harbor, Spain	43.352619	-3.079388	17-Jul-2017		

BIL3	**11**	Santurtzi, Bilbao harbor, Spain	43.330654	-3.030497	17-Jul-2017
BIL4	**12**	Santurtzi, Bilbao harbor, Spain	43.330435	-3.029756	17-Jul-2017
BIL5	**8**	Portugalete, Bilbao harbor, Spain	43.325567	-3.020627	17-Jul-2017
BIL6	**12**	Getxo, Bilbao harbor, Spain	43.33165	-3.013022	20-Jul-2017
BIL7	**11**	Getxo, Bilbao harbor, Spain	43.341866	-3.027535	20-Jul-2017
Bizerte	**11**	Bizerte, Tunisia	37.26	9.86	
BLYT	**5**	Blythe, North Sea	55.1258	-1.4983	14-Nov-2014
Brest-1	**12**	Lagonna Daoulas, France	48.31668614	-4.28627923	08-Jul-2017
Brest-10	**12**	Fishing dock, Camaret, France	48.275207	-4.587984	09-Jul-2017
Brest-11	**12**	Camaret marina, France	48.279722	-4.597133	09-Jul-2017
Brest-12	**12**	Veryac'h, France	48.261525	-4.61044	09-Jul-2017
Brest-13	**12**	Morgat marina, France	48.223575	-4.49673	09-Jul-2017
Brest-14	**12**	Postolonnec beach, France	48.23806	-4.463427	09-Jul-2017
Brest-15	**12**	Porz Tinduff, France	48.3379	-4.369133	24-Jul-2017
Brest-16	**12**	Lauberlac'h, France	48.336583	-4.413974	24-Jul-2017
Brest-17	**12**	Anse du Caro, France	48.3437	-4.44185	24-Jul-2017
Brest-18	**12**	Pointe Marloux, France	48.35935	-4.437233	24-Jul-2017
Brest-19	**12**	Marina Moulin Blanc Nord, France	48.393133	-4.430667	24-Jul-2017
Brest-2	**12**	Lanvéoc, France	48.293339	-4.453667	08-Jul-2017
Brest-20	**9**	Marina Moulin Blanc Sud, France	48.390017	-4.432483	24-Jul-2017
Brest-21	**12**	Brest commerce A, France	48.379945	-4.47392	25-Jul-2017
Brest-22	**11**	Brest commerce B, France	48.382805	-4.473206	25-Jul-2017
Brest-23	**11**	Brest commerce C, France	48.377616	-4.4811	25-Jul-2017
Brest-24	**10**	Pointe de l'Armorique, France	48.32235	-4.453483	25-Jul-2017
Brest-25	**12**	Anse de Sainte-Anne, France	48.359449	-4.551021	25-Jul-2017
Brest-26	**12**	Pointe du Porzic Est, France	48.3601167	-4.5292333	25-Jul-2017
Brest-27	**12**	Marina du Chateau A, France	48.3773167	-4.4909333	25-Jul-2017
Brest-28	**10**	Marina du Chateau B, France	48.3801833	-4.4889167	25-Jul-2017
Brest-29	**12**	Brest commerce D, France	48.374702	-4.455849	25-Jul-2017
Brest-3	**12**	Le Fret, France	48.28444234	-4.50891043	08-Jul-2017

Brest-30	**12**	Le Conquet, France	48.359043	-4.781042	27-Jul-2017
Brest-31	**12**	Penzer, France	48.343054	-4.77214	27-Jul-2017
Brest-32	**12**	Pointe Saint-Mathieu, France	48.328467	-4.7682	27-Jul-2017
Brest-33	**12**	Plougonvelin, France	48.338883	-4.69895	27-Jul-2017
Brest-34	**12**	Petit Minou, France	48.337583	-4.615383	27-Jul-2017
Brest-35	**12**	Le Mengant, France	48.34809	-4.58137	27-Jul-2017
Brest-36	**12**	Térénez, France	48.279823	-4.268145	05-Aug-2017
Brest-37	**12**	Ile Vierge, France	48.200699	-4.514774	06-Aug-2017
Brest-38	**7**	Elorn 2, France	48.40575	-4.340483	21-Sep-2017
Brest-39	**11**	Elorn 2B, France	48.405817	-4.343167	21-Sep-2017
Brest-4	**12**	L'île du Renard, France	48.291942	-4.539967	08-Jul-2017
Brest-40	**11**	Elorn St Jean, France	48.40385	-4.348983	21-Sep-2017
Brest-41	**9**	Elorn 3, France	48.406483	-4.356117	21-Sep-2017
Brest-42	**12**	Elorn 6, France	48.39705	-4.372083	21-Sep-2017
Brest-43	**12**	Elorn 9, France	48.395533	-4.3828	21-Sep-2017
Brest-44	**12**	Elorn 11, France	48.393	-4.38205	21-Sep-2017
Brest-45	**12**	Elorn 14, France	48.392983	-4.3867	21-Sep-2017
Brest-46	**12**	Elorn 15, France	48.390283	-4.39465	21-Sep-2017
Brest-5	**12**	Roscanvel, France	48.3146	-4.545065	08-Jul-2017
Brest-6	**12**	La Fraternité, France	48.307103	-4.572997	08-Jul-2017
Brest-7	**12**	Quelern, France	48.296583	-4.554522	09-Jul-2017
Brest-8	**6**	Pointe des Espagnols, France	48.339737	-4.532071	09-Jul-2017
Brest-9	**12**	Lot des Capucins, France	48.318344	-4.582539	09-Jul-2017
BretN_g1	**10**	venizella, Guimaec, France	48.700138	-3.71707	24-May-2016
BretN_g2	**10**	Poul Roudou, Locquirec, France	48.689997	-3.698187	24-May-2016
BretN_g3	**10**	Lezingar, Locquirec, France	48.687957	-3.676901	24-May-2016
BretN_g4	**10**	Pors ar villiec, Locquirec	48.694813	-3.646431	24-May-2016
BretN_i1	**9**	Léguer estuary, South point, France	48.728634	-3.546384	24-May-2016
BretN_i2	**10**	Banc du Guer sud, France	48.728948	-3.542295	24-May-2016
BretN_i3	**10**	Locquémo, France	48.721388	-3.581562	24-May-2016

BretN_i4	**10**	Locquemo, France	48.726078	-3.583713	24-May-2016	
BretN_i5q1	**10**	Beg ar form, Saint-Michel en Grève, France	48.688861	-3.582827	24-May-2016	
BretN_i5q2	**10**	Beg ar form, Saint-Michel en Grève, France	48.689137	-3.582707	24-May-2016	
BretN_i6	**10**	Beg Douar, Plestin Les Grèves, France	48.685065	-3.617125	24-May-2016	
BretN_i8	**9**	Roc'h Goalen, Plougasnou, France	48.723045	-3.804249	24-May-2016	
Brv	**63**	Bréville-sur-Mer, France	48.854168	-1.5868876	12-Jun-2017	**5**
CAD	**14**	Cadix, Spain	36.52719	-6.29842	2016	
CamaretA	**1**	Camaret, La Plaine sur Mer, France			01-Aug-2017	**1**
CamaretB	**1**	Camaret, La Plaine sur Mer, France			24-Oct-2017	**1**
CAP	**30**	Capbreton West, France	43.65525	-1.4454	2016	
CB	**72**	Carlyon Bay, SW England, UK	50.33204	-4.744566		
CER_001	**24**	Brest port, France	48.38265	-4.448869	14-Dec-2016	
CHA_OLE	**19**	Chassiron, Oléron, France	45.050357	-1.41515	03-Oct-2016	
Chausey	**14**	Chausey archipelago, France	48.884236	-1.806773	2009	**2**
CHE	**30**	Pointe de Chemoulin, France	47.232317	-2.29965	2016	
CHE_001	**25**	Cherbourg, France	49.645741	-1.623364	02-Dec-2016	
Cher-A	**12**	Cherbourg A, France	49.6453	-1.61953	01-Aug-2017	
Cher-B	**12**	Cherbourg B, France	49.64956	-1.61981	01-Aug-2017	
Cher-C	**12**	Cherbourg C, France	49.67307	-1.63244	01-Aug-2017	
Cher-D	**11**	Cherbourg D, France	49.64818	-1.6202	01-Aug-2017	
Cher-E	**11**	Cherbourg E, France	49.64208	-1.6208	01-Aug-2017	
Cher-F	**9**	Cherbourg F, France	49.64566	-1.62342	01-Aug-2017	
Cher-G	**8**	Cherbourg G, France	49.63846	-1.61964	01-Aug-2017	
Collo	**1**	Collo, Algeria	37	6.56		
COR	**15**	Coruà±a, Galicia, Spain	43.37011	-8.41393	2016	
CR	**87**	Croyde, SW ENgland, UK	51.124105	-4.246137		
CRE	**15**	Praia do Creio, Arrà¡bida, Spain	38.48047	-8.9739	2016	
Croa	**12**	Croatia	45.071553	13.620913		**1**
D15A	**4**	D15-A, North Sea	54.3247	2.9346	03-Oct-2015	
Dieppe	**12**	Dieppe, France	49.9355556	1.096702778		

Dun	**30**	Dunkerque, France	51.103133	2.421783	2016	
ES	**30**	Esbjerg, Denmark	55.486617	8.404019	07-Oct-2016	
EST_001	**24**	Le Croisic, France	47.3037	-2.5337		
FAR	**14**	Faro, Portugal	37.01568	-7.93884	2016	
FIL	**30**	Filières Pertuis Breton, France	46.2715	-1.3816	30-Nov-2016	
FINO	**2**	FINO 3, North Sea	55.195	7.1583	23-Sep-2015	
FIO_001	**24**	Le Fiol, France				
Fiol	**16**	Le Fiol, France	47.028019	-2.01954		
FRE	**30**	Baie de la Fresnaye, France	48.645278	-2.297917	2016	
FWB_001	**18**	Filière Pertuis Breton, France	46.27151	-1.381558	30-Nov-2016	
FZ	**21**	Areoura-Foz, Galicia, Spain	43.640907	-7.342928		
GR	**47**	La Guérinière, France	46.960672	-2.229642	15-Fev-2017	
HA	**30**	Hanstholm, Denmark	57.122231	8.637481	27-Sep-2016	
HARW	**10**	Harwich, North Sea	51.9348	1.2813	15-Nov-2015	
Havre-J	**12**	Le Havre, France	49.488933	0.118317	02-Jul-2017	
Havre_A	**15**	Le Havre, France	49.48586	0.11327	2016	
Havre_B	**15**	Le Havre, France	49.47316	0.11612	2016	
Havre_C	**15**	Le Havre, France	49.47	0.12268	2016	
Havre_D	**15**	Le Havre, France	49.46841	0.13867	2016	
Havre_E	**15**	Le Havre, France	49.46831	0.15604	2016	
Havre_F	**15**	Le Havre, France	49.47585	0.15841	2016	
Havre_G	**15**	Le Havre, France	49.47242	0.17341	2016	
Havre_H	**15**	Le Havre, France	49.48713	0.09767	2016	
Havre_I	**15**	Le Havre, France	49.45401	0.1651	2016	
Her	**11**	Heraklion, Greece	35.338	25.1442		
HI	**30**	Hirtshals, Denmark	57.595653	9.957281	26-Sep-2016	
HJ	**30**	Hjerpsted, Denmark	55.027447	8.636378	07-Oct-2016	
Holl	**23**	Wadden Sea, The Netherlands	53.31	5.424	2009	**1**
HORN	**2**	Horns Rev, North Sea	55.4789	7.811	10-Jun-2015	
HOS_001	**25**	Hossegore canal, France	43.655537	-1.439209	15-Dec-2016	

HOU_001	**23**	Ile de Houat, France	47.419667	-2.937233	10-Jan-2017		
HV	**30**	Hvide Sande, Denmark	56.003664	8.127828	11-Sep-2016		
HyC	**3**	putative "hybrid" from Croyde, again based on some morphological features.					
HYC	**8**	putative "hybrid" from Croyde, again based on some morphological features.					
Jer	**30**	JER, Jersey, France	49.173083	-2.020383	2016		
JOS	**32**	Baie de St Brieuc, France	48.558056	-2.600278	30-Nov-2016		
JUM	**30**	La Jument, France	47.833972	-3.900439	2016		
K10B	**6**	K10-B, North Sea	53.3626	3.2539	01-Oct-2014		
KER	**27**	Kervel, France	48.11565	-4.28515	2016		
L1	**26**	Lannion, France	48.7457	-3.590067	24-Fev-2017		
L10	**39**	Bay of Brest, France	48.34033399	-4.315824509	29-May-2017		
L10G	**11**	L10-G, North Sea	53.4904	4.1952	08-Jun-2014		
L11	**35**	Arguenon, France	48.606406	-2.219304	29-May-2017	**1**	
L12	**42**	Saint-Brieuc, France	48.557029	-2.722984	28-May-2017		
L13	**38**	Saint-Brieuc, France	48.55022263	-2.647404671	28-May-2017		
L14	**45**	La Fresnaye, France	48.639603	-2.286075	29-May-2017		
L15	**43**	Le vivier-sur-mer, France	48.638800	1.7258	29-May-2017		
L16	**71**	Bay of Brest, France	48.34033399	-4.315824509	20-Sep-2017		
L17	**47**	Pénestin	47.436261	-2.474544			
L18.L19.L20	**122**	Lannion, France	48.7457	-3.590067	03-Oct-2017	**3**	
L2	**22**	Saint-Brieuc, France	48.55022263	-2.647404671	27-Fev-2017		
L3	**31**	Bay of Brest, France	48.34033399	-4.315824509	27-Fev-2017		
L4	**38**	Bay of Brest (Camaret), France	48.2822	-4.5723	24-Apr-2017		
L5	**43**	Bay of Brest (port), France	48.377327	-4.488155	24-Apr-2017		
L6	**45**	Bay of Brest, France	48.34033399	-4.315824509	24-Apr-2017		**8**
L7	**40**	Aber Wrac'h, France	48.587646	-4.502225	24-Apr-2017		
L8	**37**	Saint-Brieuc, France	48.55022263	-2.647404671	24-Apr-2017		
L9	**31**	Lannion, France	48.7457	-3.590067	17-May-2017	**1**	

LAN-VIV	**4**	Lannion, France	48.7457	-3.590067	26-Jul-2017	**1**
LaRochA	**2**	La Rochelle, France	46.14988	-1.22359	24-Jun-2017	
LaRochB	**26**	La Rochelle, France	46.15045	-1.22449	25-Jun-2017	
LeHaCM	**14**	Le Havre, France	49.457252	0.113797	2017	
LeHaP1	**15**	Le Havre P1, France	49.464664	0.105794	2017	
LeHaP10	**14**	Le Havre P10, France	49.453519	0.173317	2017	
LeHaP11	**12**	Le Havre P11, France	49.454564	0.178067	2017	
LeHaP2	**15**	Le Havre P2, France	49.460397	0.109964	2017	
LeHaP3	**15**	Le Havre P3, France	49.45825	0.114733	2017	
LeHaP4	**15**	Le Havre P4, France	49.457344	0.121375	2017	
LeHaP5	**12**	Le Havre P5, France	49.456344	0.133297	2017	
LeHaP6	**15**	Le Havre P6, France	49.455464	0.144133	2017	
LeHaP7	**15**	Le Havre P7, France	49.451853	0.152244	2017	
LeHaP8	**14**	Le Havre P8, France	49.454406	0.160153	2017	
LeHaP9	**14**	Le Havre P9, France	49.453764	0.166017	2017	
LISB	**2**	Lisbon, Portugal	38.7635	-9.0926	14-Fev-2015	
LRM	**1**	Charente, France				
LX	**21**	Laxe, Galicia, Spain	43.225475	-9.00258		
MA	**37**	Mandà¸, Denmark	55.308394	8.647261	07-Oct-2016	
MAB_001	**23**	Maison Blanche, Noirmoutier, France	46.9976	-2.2161		
MAK	**5**	Makrigiallos, Greece	40.416178	22.612317		
MB	**30**	Maison Blanche, Noirmoutier, France	46.995944	-2.156211	15-Fev-2017	
MB1	**35**	Pertuis Antioche, France	46.037037	-1.097191	08-Sep-2015	
MB10	**10**	Pertuis Antioche, Pont ile Oleron, pile de pont, France	45.853482	-1.181018	24-Jun-2016	
MB11	**9**	Pertuis Antioche, secteur Boyard parc bouchot, France	45.958675	-1.222794	24-Jun-2016	
MB12	**4**	Pertuis breton, Loix en Ré, France	46.22498	-1.410844	08-Jul-2016	
MB13	**15**	Pertuis Antioche, Haut de Seudre amont, site Chaillevette, rive droite, France	45.734098	-1.040098	18-Jul-2016	

MB14	**29**	Site Charente estuaire amont Charente rive gauche -Fontaine Lupin, France	45.952699	-1.053588	02-Aug-2016
MB15	**30**	Pontillac, la vigie, France	45.623043	-1.052778	22-Aug-2016
MB16	**16**	Penestin (56) rive gauche estuaire Vilaine, France	47.494045	-2.454079	13-Sep-2016
MB2.MB3	**25**	Pertuis Breton , AIGUILLO, France	46.268644	-1.233045	06-Apr-2016
MB4	**8**	FILIERE pertuis Breton, France	46.278149	-1.376951	06-Apr-2016
MB5	**11**	ROULIERES pertuis Breton, France	46.30889	-1.323108	06-Apr-2016
MB6	**30**	Pertuis breton, estuaire du Lay, Le Lay pieux, France	46.296875	-1.271754	21-Jun-2016
MB7	**30**	Pertuis breton, estuaire Sèvre Niortaise, Haut Sèvre, Bouée N°7, France	46.270652	-1.178486	21-Jun-2016
MB8	**16**	Pertuis breton, Port de la Rochelle, Mà´le escale, France	46.159085	-1.241392	21-Jun-2016
MB9	**15**	Large pertuis Maumusson, Bouée Phares balise Maumusson "atterisage", France	45.782586	-1.279318	22-Jun-2016
mbitter	**40**	Mediterranean Sea, Thau + Point near Villefranche, France			
ME	**22**	M. edulis from Swansea, UK			
MeC	**4**	putative Edulis from Croyde pop, UK			
MEC	**2**	putative Edulis from Croyde pop, UK			
Mg	**22**	M. galloprovincialis from Vigo, Spain			
MgC	**26**	putative Gallo from Croyde pop initially based on some morphology features, UK			
MN	**21**	Marin, Galicia, Spain	42.393865	-8.714087	
MOG_001	**23**	Moguéric (Aber), France	48.688292	-4.070776	18-Nov-2016
MOG_001	**15**	Moguéric (Aber), France	48.688293	-4.070777	
MOU	**30**	Pointe de Mousterlin, France	47.842817	-4.041867	2016
MP	**21**	Malpica, Galicia, Spain	43.32606	-8.80175	
OLE_PON	**27**	Pont ile d'oléron / Bouée de Boyard, France	45.847389	-1.17067	14-Dec-2016

ORT	**15**	Ortigueira, Galicia, Spain	43.72246	-7.80508	2016	
Ostende	**29**	Ostende, Belgium	51.23815	2.91815		
OT	**21**	Espasante-Ortigueira, Galicia, Spain	43.715354	-7.812319		
Pal	**29**	Port de la Pallice	46.160381	-1.22275	07-Nov-2016	**1**
Palice-A	**18**	La Palice, Bassin à flot, France	46.159087	-1.215764	23-Fev-2018	
Palice-B	**76**	La Palice, lock, France	46.15854	-1.218429	23-Fev-2018	
PC	**93**	Porthcurno, SW England, UK	50.040025	-5.650185		
PD	**64**	Padstow, SW England, UK	50.548028	-4.982802		
PEN	**45**	Barres de Pen Bron, France	47.306317	-2.513833	2016	
PEN_001	**22**	Camaret plage-Penestin, France	47.497118	-2.493634	11-Jan-2017	
Peniche	**12**	Peniche, Portugal	39.36844	-9.37944	2016	
PET_001	**24**	Brest port, France	48.381188	-4.471461	14-Dec-2016	
Pir	**30**	Pirou, France	49.165883	-1.600833	2016	
PIR	**29**	Pirou Nord, France	49.182383	-1.616367	2016	
Plg	**51**	Le Pouliguen - La Baule, France	47.260288	-2.415963	12-Jan-2017	
PtArm97	**18**	Pointe de l'Armorique, plage des ducs d'albes, France	48.325627	-4.453547		
Q13A	**12**	Q13-A, North Sea	52.1911	4.1361	28-May-2014	
QUI_001	**23**	Pont d'Iroise, France	47.54575	-3.067167	08-Jan-2017	
RadeBrest_R1	**10**	Port du Tinduff, France	48.390145	-4.399726	20-Jul-2016	
RadeBrest_R2	**10**	Le Fret, France	48.338097	-4.36882	20-Jul-2016	
RadeBrest_R3	**10**	Quélern, Roscanvel, France	48.286791	-4.506798	20-Jul-2016	
RadeBrest_R4	**10**	Pte Ste Barbe, Camaret, France	48.306091	-4.550829	20-Jul-2016	
RadeBrest_R5	**10**	Ravenoville, France	48.281993	-4.571943	20-Jul-2016	
RB	**21**	Réville, France	43.554739	-7.157555		
ROC_VER	**18**	Roc-Rouge, France	45.983578	-1.405557	05-Oct-2016	
ROS	**30**	Roscanvel, France	48.554028	-2.714689	2016	
Roscanv	**12**	Rothéneuf, France	48.3146	-4.545065	2018	
RS	**21**	Kildin Island, Barents Sea, Russia	42.548425	-8.878226		
SB1	**10**	Pordic, plage du petit havre, France	48.555676	-2.716138		

SB2	**10**	Scheveningen, North Sea	48.584578	-2.78885		
SCHV	**1**	Seattle, USA	52.0987	4.2582	08-Jul-2014	
She	**19**	Cromarty Firth, North Scotland, UK	57.678405	-4.251833	2013	
ST	**21**	Esteiro-Muros, Galicia, Spain	42.793213	-9.022066		
St-MIC	**29**	Saint-Michel en grève, France	48.689017	-3.58305	2016	
StAnd	**15**	Saint-Andrieux, France	49.54744	0.0798		
STBRI	**6**	Saint-Brieuc, France	48.543	-2.7122	10-Jul-2017	**2**
StMalo	**30**	Saint-Malo port, France	48.648546	-2.021647	16-Jul-2017	
StNaz-I	**26**	Saint-Nazaire, France	47.27074	-2.19894	30-Jan-2018	
StNaz-II	**25**	Saint-Nazaire, France	47.27391	-2.20027	30-Jan-2018	
StNaz-III	**24**	Saint-Nazaire, France	47.27312	-2.20259	30-Jan-2018	
StNaz-IV	**25**	Saint-Nazaire, France	47.28964	-2.19813	30-Jan-2018	
StNaz-V	**25**	Saint-Nazaire, France	47.27941	-2.1988	30-Jan-2018	
SW	**78**	Swansea, UK	51.606754	-3.922934		
Tatihou	**24**	Tatihou, France	49.586734	-1.236274	09-Jul-2005	
TH	**30**	Thorsminde, Denmark	56.372631	8.119411	11-Sep-2016	
Thau18-P	**93**	Thau, Sète port, France	43.41052	3.701841	26-Fev-2018	
TRI_001	**23**	La Trinité sur mer - Port, France	47.584917	-3.0248	09-Jan-2017	
VAR	**28**	Varengeville, France	49.919733	0.985161	2016	
VEY_001	**19**	Port en Besin / Baie des Vey, France	49.383208	-1.094829	02-Dec-2016	
VG	**78**	Vigo, Spain	42.225194	-8.773663		
VHO	**15**	Vale dos Homens, Aljezur, Spain	37.38853	-8.82312	2016	
VIG	**15**	Vigo, Spain	42.26008	-8.70214	2016	
VILL	**30**	Villerville, France	49.403744	0.123833	2016	
Vill16	**15**	Villerville, France	49.40369	0.12351	2016	
VLR	**30**	Veules-les-Roses, France	49.878117	0.79465	2016	
VV	**21**	Viveiro, Galicia, Spain	43.689692	-7.598444		
WB	**67**	Wihitsand Bay, SW England, UK	50.359067	-4.311526		
Wim	**59**	Wimereux, France	50.772633	1.603067	2016	
WIM_001	**39**	Wimereux Boulogne sur mer, France	50.786667	1.601944	01-Dec-2016	

YEU_001	**49**	Ile d'Yeux, France	46.70645	-2.284001	24-Oct-2016
YEU_002	**46**	Ile d'Yeux, France	46.70645	-2.284001	25-Oct-2016

Table S2: Bi-allelic SNPs informations. Freq_tross, freq_edu, freq_gallo correpsond to allele frequence in references populations; Allele: allele the most frequent in *M. trossulus* references populations; MtFF: 10 diagnostics SNPs used to estimate *M. trossulus* fluorescence fraction; MtFF2: 17 diagnostics SNPs used to estimate the proportion of cancer cells in the 6 MtrBTN2 tumors from *M. edulis* hosts; Sequence: sequence around the SNP targeted in KASP experiment, alleles are represented [allele1/allele2].

SNP	SNP_name	allele	freq_tross	freq_edu	freq_gallo	MtFF	MtFF2	Sequence
mitochondrial	COI-edu_NEW	C	0,875	0,767	0,861			GRTCAACAAATCAYAAAGATATTGGNNNNNNNNNNNNNNNNNNNNNNDBTDNGGDD BNTDBTBBGGNGCRAGNYTRAGBCTRATRATYCGGATRCARBTRGGKCATCCKGGAGCAGT RTTYTTAAAAAGAGA[C/T]TGRTTYTATAATGTGGTKGTYACAACRCAYGCCTTAATRATAATT TTYTTTGCTGTRATACC
mitochondrial	601-COIII	T	0,824	0,765	0,886			CGCGGGGAGTTTTCTAGTCAACGACAYTTYGGGTTTGAGGCTTGTATTTGGTACTGACATTT TGTAGATGTGGTRTGAGTGGCATTGTGGTGCTTAGTGTA[C/T]GTGTGGTTTGGAGGATGA TTATATATGTGRTGGTTTAAGATATGGGAYGGGGATGTTTAYACATTTAAGTAYCCGGATGC YAAACCTTCYT
nuclear	001-C10081_p1314	A	0,990	0,995	0,060			TGATTTTGTTGGACTTGCTCAAAATATGCAACAGACAACACCTGAAACTTATCACACACCAC ATCGATATCAATCAGACATGTTTATGCCAAGTTATGGTCCATCTCCTCTTAATTACCTCAATCC GCATGCGCCTATGCCACCAACGAC[A/T]TCTTCCGGACTCTTTTGTTCTCCAAGCCCGTATTG GCCATCAACGACCAATAATATCTTCCCYAACATTCCAGGGGTTATCCCCKCATGGAGTACAR CCGCACG
nuclear	002-C10366_p321	A	0,949	0,000	0,429		**X**	CCACGCTGAAACATYAAGCRSCCCACAGACAGTCAGCAAARTMCTTACYGTAAGATCACCAC TGGCAGTSAATGCACCAAGAACACTGTACGAACCTACAACMGGCCARACTATMACMTTGA CATGTCAGGTRACATCTGGAACGGCCAC[A/G]TCGATCACCTGGTACAAGGAYRRCCAAMT GTTAAACCTKAATGCTAATTCAAGATTATCTGGYGCCAGTCCTGGRKYACCTTCRATKACCAT YAGCAACGTACAAACAAGTGATACTGGCAATTACATATGTTCAGCTTCCGATGSAK
nuclear	007-C14012_p60	T	0,969	0,111	0,710		**X**	ATGRGTGATCAGRAAAATAAACCRAGACTYTGTCATTTGTCGAAGTGGCCTGACAATAT[A/T]TTCCCAGGATATGGTTTTARTTTACATGCRGAAAARGGAAAAGCAGGGCAGTATATWGGA AAGGTAGACGAAGGGTCCCCTTCAGAAGCGGCAGGATTAAAGGAGAGTGATCGTATTGTW GAAGTCAATGGAGTTAAYATTGGWAACG

nuclear	009-C14115_p131	T	0,970	1,000	0,710			GACAACAACCCATGTATCAGGGTAAAAAATTCCGTCCMCCCAACAARTCAGATGAAGACAG TTATGACAGTGCCCAACAYGGACCWGTAGATGCTGCAACAGCTCAACAGCAACAACACCAA CAGTTTCT[A/T]GGAGATGCTTCTGGAGCCTTACCTAACTTTGGAACAATAGACACAACAAA AATACCCTTACCAGATGGYGTTACCCTKGACCATATYAAAGCCTTTGAAAAAATGCATAAAG AACATGCTGAGGCAATAGTGGATGTAGTGGTCAATT
nuclear	014-Contig16504_pos702_Edu_EU_US	G	1,000	0,565	0,389			CTAAATCWGAATTAGAGAAWGTMAGRCAGAAACAAAAGGATAATAAAGCTCACATTCAG TCAGTTAGAGAGAAGTATGGYRGCAGTAGRGGWAGCAGAAACAGACAAACTGTATCCAAG CTGGAGAGGATGAACGATTACTGGAGAGACA[A/G]GAAGCTCATCTGGAAGAGAAAACM AACTGTTTCCACAGATGTTTGGTTATATTCAGACCATTTGAAGTRGTTATAGGAGTAGCTTTC CAACTTCTGACATTACTYATATTTCTGTCTTTACTACTTACAAACATTGATAAGGCTCTAC
nuclear	015-C17324_p1089	A	1,000	0,000	0,861		**X**	TGGTCTCAAGAAAGATGTTATTTTTGAGGGAGATMGRTYAAGTCCTGTAATATCAGATATYA AACTTGAAACKGACAGTGATTTTGGTTCAGTTGAGGACATTCCATCATTGTTAGATACAMGR TACCAACCAAGAGTTGCATTGAGGTT[A/G]GCWTTRTCAGATTGGATGATAGAATTAAAGA CTCCTCGTACWCAACAGCCTATGCCAGCTCCTTTAACRACAGTRTTACCAACAAATGTTGCA GYTATCTCTGAATTRCAGAATGGARGTATGGTGAATGTAGGTGGTGGAGAYTCTT
nuclear	017-C17424_p75	T	0,990	0,266	0,471			ACTGATGGAGCTMTTGTTGTTGTAGATTGTGTGTCTGGTGTATGTGTACAGACTGAAACCG TACTTAGACAAGC[A/T]ATTGGAGAAAGAATTAAACCAGTCCTGTTCATGAACAAGATGGAC TTGGCCTTGTTGACACTTCAGATTGAAGCTGAACCTCTGTACCAAACTTTCCAGAGAATTATT GAGAACATTAATGTCATCATTGCAACATATGACATTGAAG
nuclear	022-C20739_p355	T	0,911	0,000	0,833			TGATGGAGATATAGAAAATAATCAGGATGATCTCAGTTCTTCGTCTCCTCCCAGCACTCCTC AWTCTGTAGACACTGACGTCASKAAACYGTTACCACCTGTTTCTGATGTAGATGTGAAGCCG GAAAYCCCAGCTAAATCACCTACACC[A/T]CCTAARTCTCATTTCTTATCACCACCTTTGAGAR TTWCTTCCCCTCTTGAACCTCTTCATTCCAGCACACCTCCTGTAATCCAGCACCTTCCTCCTCA YTGTCCYCCACCATCYTTAATTCCATCCTCAACATCACAGACTATCAAAA
nuclear	026-C23582_p410	G	1,000	0,000	0,863			AGATATGAATTTCCCATTTGATGCAAATTTYTTTGAAAGTGAGGATTTYAATCCGAAAGAAA CTTTTGCYGAGTYGCCTCYGTCACAATTGTGCTCTAAATTAATTCAGGATTGTATGTGGTCTG GAGATRCATTTTCTTSCAGYGAGCA[A/G]AAGGATAAAACATCTTCATCTTTTGACATGAAAA CTGTTGATCCAATGGCAGTTTTYCCATGTTCAGTAACCAAYAATACAAACAATTCWCACAGC ATTATGGGCTACTTGAGTGAAACAAAGCTTCACAGTCTTGGCACAGAAACAC
nuclear	035-C27467_p175	C	0,968	0,000	0,000	**X**	**X**	ATGAGGAGTCGTATGATTCAGCAGCTAATGGAGCTTGGTTTTCAGAAAGATGAGGCCGGGC AAGCATTAATAAGCAACAATATGAATTATCAAAGTGCTCTAGCTGAACTWTACAAGCAAAA AGGTGCTACTTATAGAGATGATGTATTA[C/T]TGGAAAGTGCCAAGTCCAAAGTGATAAGT GATAATGACATATCAGATACTCAGCAGGAAAACAATCCATTTGTGCCTAATCCAAATACTCC TTTTCCTCCACCAAATGCTCAAGCGTTCAAGGGACCTAGTCAGCCAGTCTCTAGTCA

nuclear	036-C2959_p251	A	0,990	1,000	0,864		CATGTTATGGACAACATTGGTCAATGGAAGCCACTGTATGATTCCTCCACMCCTCAGGAMK TTAAGTTACCGAGTCCATTCAAYGTTMTGACAGGACTGGATAAGATG[A/G]TAGTGTTACG TTGTTTCAGACCAGATAAAATAGTTCCWGCTGTACAGGATTTTATCACAGATAACTTAGGAC AATCATATATTGAACCACCAACCTTTGACCTRGGTGGATCATTTGTTGATTCTWATARTTGTT CTCCATTAATTTT
nuclear	038-Contig31315_pos1274_Edu_EU_US	T	0,760	0,527	0,624		GGCTTGGGTGTGCAACCATTTYACATGGGAAGCAAAAACAGGATGGAGAGATATGAARAA CTTTGTYCGAACTGGGTTYGAAAATCATCTRATTTCTCTAGTTTACATTATGTTTYYAATATTG ATGAAYACTGTCGTGGCCATGAGAGC[C/T]CAYGGAATYATWACYAATCATAGAGAAAGCA TTTTTATTGGAATTGCKTCTGGTTTCTGTATTCCAATYTGGATTGCATGGGGTYTKGTWGCRG GACTYAACCGGGAWCACGACGTRTCACACGAGTTTACGGACGCMTGTATGGCAT
nuclear	040-C33286_p476	A	0,571	0,995	0,642		AGAATCAGAAGACGARGGRTCWGCTYTACYGAAAAAGCCYGGTTCTACATTAGGAAAAAT WMTTGGTGCAAAACARARRACAMTAGAGTCAATAAGTTCWATCAATGAACCTACTGSYCY CCCTGGYTCTGTTATAAGTCGTGCAAGACG[A/G]GGYACAGTTACMAGCATTTCGGAAGAC GATTCAGAACCCACAAAACCGTTGAAAMCWGGRATATTAGGCAAACTYAAGGGYGTTCTY GARGCTCMAATYATMGAYGAATCAAACGAAAGATCCATTAGAACTCCAGCYAARCCAGCW T
nuclear	043-C3749_p849	A	0,640	0,010	0,000	**X**	AGAAAAAGAGGAAGAGAAAAAGAAAAAGAAGTTAGAACAACTGAGGAAGAAAAAAGAAG AACAAAAGAAGAGAGAAGAAGAAGAAAGACAGCGGGTAATMGAYGCAATGCAAGTTGGA TCTGTACTTTGTGTRGAGAAYATTACAGCAAT[A/T]GACACAGAAAGGGAGGCAATCAAAA ATTATTTCWCAGACTTTGCCCCWGTGGCGTGGGTRGACTTTGAYACAGGTGAYACAAAGGC TTGTGTCAGGTTTGAAGAGGCAGGAAAAGCGGAGGATGTTTTAGAAAAAGCAAAGGCAGC TA
nuclear	045-C39969_p416	A	0,959	0,809	0,997		ATATGTAGCTGCAGTATTTACAAACCAATCTCCWGCCATWATACATTACATCAGCTGTGTTT TATATGCAACTTATTTATGGTTTGCAAAGATAATTATCATCAAATGGTCATTACGGGTATTGC TTAGATATCACAAATGGATGTATGA[A/G]GCAAGAGGACCAATGTCATTAAAAACCAAAAT TTGGATTATGACTGTTAAGATATTAGGAGGAAGAAAACCTTTATTGATGAGCTATCAGTTTT CATTACCAAAGTTATTTGTGCCTTCAGTGAAAGAGACAGTCAATAAGTATTTAA
nuclear	047-C40145_p294	C	1,000	0,000	0,909		TTTATTTGCAGTTTATGATGGTCATGGAGGTGCAGAAGTAGCACAGTACTGTGCAGCTAATT TACCCCARTATATTAAAGAMACRAAGAGTTAYAARGAAGGMAGATTTAATGAAGCATTAG AAGAAGCATTTCTAGGTTTTGATGCCAT[A/C]TTAACCACCCCTAAAATTGTTCAGGAACTGA AAGTATTAGCTGGAGTGGARTCTGATGATGAAGGAGATCCTRMAAAKAKTMTCAMAMRR CAAAGAACWGAGGCAGAACTWCTYCGACAGGAAGCAGATATGCCTATTGAGGAGTTAA
nuclear	049-C42467_p335	T	0,990	1,000	0,092		TTGTTGTACTGGCTGGAKCTTTRTTAGAACATGCAGAAAAGTTAYTAGACCGTGGAATACAT CCAATCAGAATTTCWGACGGATATGARATGGCAGCAAAAGTAGCTTGTKCTCATCTTGACA CCATTGGTGAAACATTTCAGTTAGACC[C/T]RAAGAACAAAGAACCATTAATTCAAYTGGCM ATGACAACACTKGGCTCAAAAATAGTRAACAGATGCCATAGACAGATGGCAGAGATTGCYG

								TRGATGCTATTTTATCAGTGGCTGATCTGMAAAGGAAAGATGTTGATTTYGAGTTR
nuclear	050- C42717_p 722	C	0,978	0,705	0,976			AGACATACAAAGGTRTTCATTTTGGTAATTTGGCATCAAAACGYCTTGATTTAAGTAAAGGT AAAATGGGYCCTGGACCTGGRGAATATGAGCCTTACAGAGAKGCCAGYATGAAAGCAGAR AACTTAAATTCTATAGCAGAAGAACAAS[C/T]TAGATTTGAAGCCAGAATCCCAAGATATCA TGARGCTATTCAGAAAGAWGTGGAAAAGAAGGGAGTTCCAGGACCAGGRAAGTATGATG TGAARGGTGTTTTTGAYCCAGAACCTCCYAAGGTTAAYACAGAGGGAATAGARGTAGAR
nuclear	052- C44265_p 303	C	0,980	0,005	0,785			AGTWAATCAGTTAGGTGGTGTATTTGTGAACGGGAGACCACTTCCRGATTCAACAAGGCAA CGAATTGTTGAACTTGCCCACAGTGGCGCTAGACCATGTGACATWTCTAGAATTCTTCAAGT ATCGAATGGTTGCGTAAGCAAAATTCT[C/T]GGACGTTAYTATGAAACTGGGTCAATACGAC CWCGAGCYATTGGTGGCAGTAAACCAAGRGTTGCYACTAATGACGTAGTTACAAAAATTGC TCAATATAAACGCGAGTGTCCATCAATATTYGCCTGGGAAATAAGAGAYCGYCTAT
nuclear	055- C4715_p1 037	C	0,957	0,989	0,102			CCTTCCATTAAGACAGTAGTTAATTATGACGTAGCCAGAGATATAGACACTCATACTCATCG TATTGGTAGAACTGGCAGAGCAGGAGAAAAAGGTTTTGCTTACACYTTRGTWACAGAGAA AGATAAAGACTTTGCTGGTAGTTTAGTA[A/C]GKCATTTAGAAGTTGCCAGCCAATYTGTWC CTAAACCCCTTATTGACATTGCAAATAAAGTACCTGGTTYAARAARAGTAGAWTCAAACATG AGAAAGGRAAAAARTTYAAACTTCAAACAGGAAAAGGACTTGGTATGAAAGARAGG
nuclear	059- C54420_p 784	A	0,989	0,000	0,000	**X**	**X**	GTATCAGTGGGTTAAATGGATCAGGAAATATTTCAGATGGAGGAATGCTACAAAATGAACA GAGGAGAGTYCCAGGAGGAGGTGGAATGCTTGGAGGARGAGGYATGTCATCTAATCAACA AARCAGAAGAAGACAAGGGCATGGAAATG[A/G]TACTCCTCATGGTAGAATGGGTGGTGA GGGATACCAGGAATGAATGGTGGAGGATACCAGGAATGAATGGTGGAGGATACCAGGAA TGAATGGTGGAGGAATACCAGGAATAATGGTGGAGGGATACCGGAATGGGACTTGGAGG WAT
nuclear	061- C6231_p1 094	C	1,000	0,000	0,908		**X**	ATTTGACAAGTTTGAGTGTTCATGGAGTGGTGAYGATAGGAACATTATGACTGGGTCATAC AACAATTTCTTCAGAATGTTTGACAGGGAGAGTAAGCGTGATAATACTTTAGAGGCCAGTA GAGAAAATATGAAACCTAGGACAATTCT[A/C]AAACCAAGAAAAGTTTGTACGGGTGGAAA ACGGAAAAAAGAAGAAATWAGTGTYGATTGTTTAGACTTCAATAAGAAAATTCTTCACACA GCTTGGCATCCWAATGAGAATATCTTAGCWGTAGCAGCCACAAATAATTTGTACATTT
nuclear	062- C63342_p 1271	A	0,990	1,000	0,083			GGAAACATRTWMARTGGTATGCCTCAAAGTATGYATGCTWTGATGGGTCATAATGCTAGY ATGTACAAYCAATCAGATATKTCATCACCTCTTATGCAGTTAATCCAGTCAGTACCAGCAGCA GGTAGAGACARCCAATCATCTGCCATG[A/T]TACAAAATATTACCATGCCAACARCTGGAGA CAACCAGTCATCARTGTTATTGCAGAATGCTTCAATGCCYRTTCCACCTATGAATAATTCCAT GAATCCATCTTACAATKCATTYGACAACTYAGGTACTTGCCAGCAAAATGGTAA

nuclear	063- C73535_p 928	A	0,979	0,000	0,829	**X**	ACAGGGACTTACACTAATCATAGTATATCAGAGTCKGCTGTCATTCCTCCTCAAGCACCAACT AAGACAAAAAGAGGTGTAAAAAGAAAAGCTGATACMACCACACCCATTGTTGCAACCATG CCTAAGGATCCATCAATTGAACCAACT[A/C]CTGTAAAAGTAGAAAAGRCTCCAGCTAAAAT TCCTCCCACTCGAAGAGAAAGCAATCGTCCGATYAAAAAGCCAAAGAGAGATTTACTAGAA GAAGATTCTCCYGATCCAGAAAAAACAGTATCTAAAGCAAAGAAAGGAAAACTGTC
nuclear	064- C73872_p 884	T	0,989	1,000	0,112		CCCCMAATCAAGATTCAAATATKTATCGCGCMAAATCTTTGCCTGCYTTATTTCCKGTAAAA CGYAGAAAATCATCTGAYGCWCAGATTYCWTTGACRTTTGAAAAGAAACAAAACRTTMATC CATTTAAAAAGACATCCGAAAGGCATA[C/T]GGYGGRATGCCAAATTTACTAGTTGGTAAAA ATATTCAGGGGAAATCGAATGAATTTGAWGAAAATRTGGAAGAAAACCCAAGGYCWGCKY CRAAACCAAGTTCAAATACAACRATACCACACGATCATTTAAAAACTYATCAYAAGG
nuclear	067- C77511_p 1253	C	0,990	1,000	0,091		CAATGCAGCAACGAGCGCAACAACAACGTGCAAATGGAAGTCCACCTAAYAAACAGACTGA TYTAACRTGTTTTCAGAATAAAAATAGTGAACCYATGCCATTYACAACATTTGGCMGAGGGA TGCAAAAACATTCAACMCCTCAACARC[A/C]AATGTACTTAGAACAATTCCCTACTCCTCCAT CAACACACAGTATGGGMTCACCGCCACAGATGATTCATCAACCAGTGCTACCAGATCATTA TCTCACACCWTCACCAGATTCACCTGGACARTGGTCAAGTTCATCRCCTCATTCA
nuclear	068- Contig775 41_pos349 _Edu_EU_ US	T	1,000	0,630	0,908		GGAGCAGCACAAGCACTTACTGAATATCATGATTTAACAAGTGTTTTGGTGGATGGAGGGG ACAGGTTCAGTGTYTCTGCCTTGACATTTGATAAACAAGATCTATTATGGATGGGCAATTCA GGGGGTCATGTGACAGGTTATTATGGG[C/T]TAGAAATGCAGAAGTATACATCATTTAAAG TACACATGACAGAAGACATTCGACAGATGATACCAATACAGCGTGGAATATTGTCTCTGAC GAGAAGTACACTGAATTGTTCACTTCGAAGAGGACTAAGTGTGTTCAAYTMCAAGTC
nuclear	070- C7841_p7 13	G	1,000	0,304	0,320		TARATCAAGACTRAAGGGTGATTCGTCTGATGTYGCYTTTATYCAGGAAGAAATGAAGGATC ATTTACTAGCATAYCTACAGTGGCAGAGYAAAGTTGATAGACTTTTCGATCGTGCAAARGAC ATTRTTCCAGTACAAGACAGAGTAGA[A/G]AAATTACAACATTCTAAACCAGTGATTGCYTT AACWGAYTACAAGACATCTGAGATTGAATTCATCGAAGGGGAGACGCTTACCTTAGTAGAC AATAGCAAGCGAGATAAATGGAAGGTACAAAACGAAAGGGAACAGACTGCCATGG
nuclear	071- C81364_p 839	G	0,970	0,711	0,986		TGATGAACAATTYACAAAGCTTAGCCTTTCTGGTGGCAAACCAAAGAAAAACAATGTYATTA ARTCACTATGTCTGTTTCTGGGACCRGACTTCAGTACTGAYATCATTACWGTAGAAACATCT GACCATGCAAGACTRTCWTTACAGCT[A/G]TCGTACAACTGGCACTTTGAAATTGAAAGYA AAGAGGATAAAGTAGAGGCTGCWAARATTTTCAGTGTACCAGATTTCATTGGAGATGCCTG CAAGGCTATAGCTTCCMGRGTCAGAGGKGCCGTRGCACAAGTACAGTTTGAYGACT
nuclear	073- C8592_p1 593	A	0,910	0,005	0,860		TCATCCRAAAGATGACGAYAAGTCTATTTTTAGCCAATTTGCTGAGAAAGACCATGCCCGTC TSATCACAGTTCTTGATGCYTCAAATACAAAACTTCCTGAAATATGGGATTCCATTTGCAAAC TTCGTGTTYTGACYGTCGTGAAACT[A/T]ACACAAAACGCCATCAGTGTAATACCWGAAGAT TTYTGTAAACTYAGAGCGCTTCARGAAGTAGATCTGAGYAAAAATGGAATAAATGAAATACC AGACAAATTCAATCAGCTACAAAATCTCCGAAAACTGAATTTAGCCCACAATA

nuclear	076- C9105_p9 49	G	1,000	0,964	0,111			TTCKTTAACAGATGTTCTTGAMAAGCTCAATGGTAAAGATGATGGCTATGGAACAATGTCTC CCTCTATGTCGCCATGTTTAGGAAATTTTAATCCMCAYKTRTATGTACCMCCTGAAAAACCR GTAGTAATGCATAAACCGACAAAAGC[A/G]TCRATGGCGTTGCAAACACAYAACAGTCAAW TTTAYCAAAGACGACTCGTCAGCAARAGYGCTCCYTCRATGCRCAATGTWCWAGTTGTTGG AAGTTACGCACACGAGAAAAAACAATGGGAACTACGTCGYGAAAAAACAGAAATRG
nuclear	080- C96364_p 474	G	0,990	1,000	0,082			CGAACAACAKCAACAATCACAATTTACTCATAGAATMCAATACAAAGGAACTCTTGTTGCAT CATCGGTAGCRCCYGTATCTACAAGCTCAGATCATCTTCTTCCACCATCAAGYTCACAGCARG TCTTTGCTCCACTGTCACCTCTTTT[A/G]AGCATTTTGACACAAGCTGCCCAGCAAGCACAAC TTTCATCACWTGTGCCWCAAATTCAWCAACAACAGGAGTATCCCGATATTGCYGARTTGTC KCAATATCTTCARCAACAACARCAACARCARCAGCARCAGCCTCGCTTTAGTC
nuclear	082- C9777_p6 12	C	0,980	1,000	0,874			CATCTCGAACTCCAGATTTCTTYTTYGGATCAACWTTTTGTGCTCCKATCCCWACAAATWCY GAAGGAARTCCTATGCTACCARCTGCTGGTAACATGTTCCCATCGCCATTTTTCTCCGGACAA CAAATTYTCGATCAGCCTTTTGCAA[C/G]TGTACCACAACCTGTTCACGGTCAAATACCTCMA ACGCATAAATCTTTCTGYGTCAAAAACTGTTCTCCAAATATKGCAGACCGACAAGGTCGTAA TGACACACTACGTGCACTGAAAMGGAAAATTCAAGAAAATTTCACAACATGC
nuclear	085- gi_212815 835	C	0,644	0,788	1,000			AGGTACATGTAAAGATAGAGAAATTATGCGACATGACCCACATAAATTGGTTGAAGGGTGT CTTGTAGCAGGAMGRTCTATGGGTGCWGTGGCAGCCTACATTTACATTAGAGGAGAGTTY TATAATGAAGCTTCTAATCTCCAAGTTGC[A/C]ATTAAAGAGGCYTATGCTAAYGGACTTATT GGTAAAAATGCGTGTGGGTCTGGYTATGATTTTGATGTGTTTGTTCATCGTGGAGCTGGAG CATATATATGTGGAGAAGA
nuclear	088- gi_223020 458	C	0,948	0,000	0,000	**X**	**X**	ACGAAGACATGGTTTGAGCATTTAGAAAAACCTTCATGGAAACCACCTARCTGGGTWTTTG GTCCAGTCTGGACAACCTTATACACAAGTATGGGATATGCYTCRTACATGGTGTGGAGAGAT GGTGGTGGTTTTAATGGTGAAGCAACA[A/C]TACCACTTGCCTTATATGGTTCACARCTTGC ACTTAACTGGGSTTGGTCACCMCTCTTTTTTGGTGCTCATAAAATAGG
nuclear	094- gi_223025 780	C	0,978	0,005	0,839			GTTGGCCAGCTTRAARAAACTGGAAAATGARAATCAAGAATCTGCAAAGCATTTGGAAGAC ATTGT[C/T]AGTAAAGGAGAKACATTACTGAGTCAGATACAGGAAGTTTTGCATGATATYGC TGAATGTCARCTTCGATGTCAAGCTTTAGAATCMAATWCTTGATGATAGTATGAAAAGTAT TTTGTACAGTGTGTAAAATAACCCCARATAAACT
nuclear	098- gi_238643 554	G	1,000	0,766	0,986			AAAACATGGACAGAATGTYAKTTAACAACCATTCAWAGTTCKTTCTTAATAATCRKTTCTACC CGTARCKGTCTTTTTTCGACAGAGATCGTCTTYATATYYCAAWAWAAGTCACTCCAAATAAA TAAACRAAAATAAACACTGGCGCTT[G/T]AAATTCMACTGAATGCTTTACGACAATATTGTT CTAGAGAAAGAACTCTTCTTCTTCTCCATTAAATACTAYGCTYGGAACAGTTTGRTCRCWATK TTTRTGATCCAAGATTGTCATAAAACCMGGTGACTGTTTCCYATTGATCCAC
nuclear	099- gi_238644 156	C	0,990	0,984	0,136			CGANCAACATCTGGATGCTATGTAACRATGATGGTCCAGTTCACKGATGAATTTACYAATTC AATATATCACACRAATTCATTKMTTAAAATCTAAKSTCCACCTGGTTTATTTATTTTGTG[A/C] AATACGCCAWKTGATGTACAACTCTTGGAACTTGTCAAATCCAGCCAATACACCAGCRCCW

								KCCATTCCTCTGAGWACRTTGGCTCCTGCTCCCTTCATCAAGGACATGAACCCYTCRTTCTTG ATAATGGTCATTGTGCAGTCAATT
nuclear	108-gi_37650308_gb_AJ516731_pos350_stl_tva	T	0,989	0,000	0,000	**X**		GAGAGCATGTAAAAAAATGGAGCAACTCTTGCTGAAATTAATTCACAGGCAGAGCTGCAA TTTGTAAGGAAATTAGCAATGTCTGGCCGCAGAACTTCTTGGATTGGTGGTACAGAT[G/T]C GGCTAATGAGGGAGAGTGGAAATGGATATCTGGAGCACCAATKACTGTCWCYGACTTCAA ACCTCTTACAARCAAACAAATGATAAAATATGATCGTCCAGAGAGACAAGACTGTCTTGCTA TTTCGTCACATGTTGATTTCCACTG
nuclear	109-gi_380851736_gb_Contig10267_pos417_Edu_EU_US	A	0,947	0,144	0,032	**X**	**X**	YCTGTCCAACATCAGTATCCATKGTAAACTTTCTGGCWGTRGC[A/G]CCATTGTTAGTAAAG ATTGCTGTTCCRTTTCCATAGGGATTRGCATTAATCATATTRATRGCATCRTCTAAWGTYTCW ACCTCCATACTGACCAACACKGGRCCAAATATYTCYTCYGTGTAACATTTCATTTCAGGCTTG ACATAGT
nuclear	111-gi_384113180_emb_HE609053_pos1114_stl_tva	G	0,910	0,021	0,000	**X**		AAAGCACCCATTAGTACAAGCTACACAGCGTCTACATTCCAAGGCACCATGAACTGGATCAA ATTCAACTTTCCTATCCTTCAGTTGCTCTAAACCAAACCCTGGAGGACACCTGTCACATCTCTT GCAGAAGTCTCCTTGGGGTAGATA[A/G]AAYTCRTGTTTGCTATAATCGCAGTATATGTCAG TCTTCATTGTCCAGACAATTTTCAGATTTACCARTAAGMCAGCTAAAAKAAAGGACATGCTG AACCTGTCGTACTGAAGACTTTAGTTGAATC
nuclear	115-gi_384113217	T	0,986	1,000	0,077			TTCAATTGTTGACTGGGTATCTACCTATTTGTGTAATARTTTAGAGCAATGGATTACAGATAA CGGTGGTTGGCWAGGATTTGTGGAATTCTAYAACCAAGGACARAATCATAATGACAGTCCR TGGGATGTGAAAGGACTTGTTAAATA[C/T]GGAGCAATAGGWGTAATAGGCGCAATGGCG TTAAGTGCTTTTCTACAAAGAACGTGAAAATGCCTTGATTGGCATATTGTTGTTGTTTTGTTA TTGTTATCAGGTTAAATGRAYRAAACTSGTGACTTCATTGGMTGTATAACTACAG
nuclear	117-gi_38635427	C	1,000	0,188	0,658		**X**	ACGACAGTCGACGTTTACCTWCTACAACATATACTTCAGTCTWAASTTGTGTCAGAATGGG TCGTTACCAAATTTCCTT[C/G]CTGGTGCTGTTTTGCGTTGTCAGTTTATTGACCAGGGGYT AACTAATCCWGTTGATGACCACCAAAAYGATGAMCACCACGATGCYCCGATAGTTGGYCAC CAYGACGCTTTCCTYAAGGCCGAATTCGATTTAACATCACTCAATG
nuclear	124-gi_387154968	C	1,000	0,995	0,382			GAACCTTTYWCTSGAAWTYRGAKRACRTAACATWRCAKAWTATTGATATAGCATMRATAT GTGGCAYAMCATAGGAATGATGATCATAAAMWATTAATAGCACTTTGGTCAATAAATTAA ATTGCACAAT[A/C]ARKTATCACATTGTAAAATGTCTTGTRTAGTCATATTCTATYGTTGGRAT CACAGCTTGYACAAACTTCAAAAAWATCATTAAATATACATGTACTCCTAACTCTCCTCCGCC ATCAGCTACCATCTGTATTATCTTCTTCATAACAT

nuclear	126-gi_387154971	G	0,949	0,551	0,084			AGTTCTGAACACCCAGAATGCAAAAGCAACAAGTATACACACTATAATACCAAAGCTAAACC TCTGAACACATTGATCAAGRGGRATAACTGCTTCAGGAATTGTGACCTTGTGTGTACCATTR TAYTTTATATTGGCAAACAGGACATC[A/G]TAATCCACACARTCAATCAGAAATATAGAAAA TAAAACAACAAACAGGAACTGGATTAGTTGTAGTATATCTTCTATGACCATACAACCAAAAC CTCCTCTTTGATGATAATTGTAAACTCTGGCAAAAAAATCATCCAAATTTTCTA
nuclear	127-gi_387154976	C	0,989	0,005	0,043	**X**		GATCAGGAATWTAGGGACWGTTCGCCMAAAGTACGGCGAGTYCYCGTTAATTTACARGAC AATCATGTCRACWAAAGGGATCTCRTTGATGGAYYCTTCWAAWAGTGGAGGRAATGGATC TTTTAAAACAAGTTTCTTCGCYGATATTCA[C/T]AAACAACTGGGTTTGTTGCCAGGATTTCG AGGATTGTCACARGAYRTGAATAAATTAGACCAGGAAACWCAAACACCGGGYAGTGGGTC GCCWTTGGAAAATGTWAGAACAATGTCAGAAACAATTKCAACAGAYGTKATTATGAACT
nuclear	138-abyss_C1219_p217	A	1,000	0,228	0,000	**X**	**X**	TATATGAATATTAAGCCGAATWTATTWAAGTTATAAMTTATATCTACGWTTACTTCTTTTTC AGGGTTTCTTGAGAGTGGTCTCTTGGTGAAAGATGTTGGTCGCCTGACCAACGTATACTTGA AGTCTTGGATGTTCAAGGTCGACATA[A/T]TAGCCATCTTACCAACCGATTTTTTYTATTTTCT RCAACGAAATACAGCCTTTCGTTTAAACAGAATTATCAAAATTTGGAGAATGAGGGAGTTTT TTGGCTTGGCTCAGACTCATACAAACTTTCCMAATCTTTTTGGTGTTGCTCA
nuclear	145-abyss_C216_p5751	T	1,000	0,990	0,156			YKTGTRAWTTGATAGAGTGAKCATGGACGWGGGTACATGCTTAACTTTRYAACCTWGGTA ATTAGTAAATCTYRAGKTAAAAGTWGTATWYASATTTTCCCACGRTTTTAGTGACATGCGRY TGKKGTGAGTTATCTGACCGTGCACTTT[A/T]TAAATATAACMCAAKAACAGGACTTTCACC CTTTAAACCRKTGCCTRAGGSAATTGAATCACAAGTAATGAAMTAACATTTGAAGAAAAMA GAATTATAAATYGMAGGTTGATGACCGGTTTGCCTATTTTATACCGACAAGCTTATT
nuclear	155-abyss_C477_p4647	A	0,990	1,000	0,088			GAAYTAAGYTTATMAACAAACKAGCGGRAAARGCTAGYWAGAGWGWWAGYAAACACCT TYTTKAACRWCACTGAYATWATTTTCATYCAATTCGTTGTRTTCTTATTGAYATMTWACAGA CAAATAATTTACGAGCGAAAGCAATTTCCT[A/T]CTTYAACAGTCTCGGATGTAATCAKAAG ATGTACGGTTTCTACWCATGATATCTAAAAARCACTAAATTGTTATTTGTRTGAAWTTMTG AAATGGAAAAWAYCCATTTTTTCTTYGAYCTTGRATRATACMTCAYWGTGCTGAAGCAG
nuclear	159-abyss_C783_p5373	A	1,000	0,980	0,230			ATTGACTTTGGCCGCYATWGCCGTAGAACGATGGTAYGCCATCTGCCGTCCATTGKCKTTTA AAAGTACAMGRAAGAGGGCAAGGATTATGATCATTGTRATATGGTTGGTKTCMGGTTGTG TGGCACTTCCAGACATTTTATTCATGCA[A/G]CTGGATAGTTTGGTACCTGATTTTGTGTCTT CATTGTTGATATCGTGTCGTCCAGGATGGGACCAARACAARCAAACATTTTATCAGGTTGCC TTAATTGTCYTATTGTATTTCYTACCAATGATTTTTATTGGATTYGCCTATATAC
nuclear	164-abyss_C906_p3592	T	0,970	0,968	0,045			ACCRATGCCTAAATTTGAAAACCTTACMCCAAATCAAATAGAATTTATCAGGGCAATGAGA ATGAGGCCWCCKTTTCCTCAAATTCCWGGTATGAGACCAGGYATGCCTATGCCACCAAGAA ACATGCCACCTCCACCAAGATACCCTGG[G/T]CCTCCTATGACATCTCCAACAGAYGCAGGR GCTCATCGGCTTCCWGCAATGCCACATCCATCTCTMTCTGGTCAGACACCAATGCCACCTCA GGCCTCGCCAACGTCCTCAATAAGGAGTATYCCAGAGTCACAAAGTCCTCATCCTT

nuclear	166-soap_C1072_p3271	T	1,000	0,984	0,151			ATCATTCCTCCACCTGATGGTCTCGAGCAGATCAACATTATACGAATGGAAGTTCTTTGACG CTTACCTGTTTTTTCCACTTGTAAATTTTTTCACTGCTTCCAGTGTCTGGCTGACAGTTGGGGT AACAATTGACAGATTTTTATATGT[A/T]AAAGCGCCATTGTGGGCTCGAGCTCAATTTTCGTT RARCAGAGCCAAAGTAAGAATAGCAATTATTTTAGTTGCAACAATTTTTATCACAGTTCCAA GATTCCTRTGTTTCAGTCTAGTAGGAGCTACTAACCAATACCATYTWTAYC
nuclear	174-H_L1_soap_Contig1865_pos4732_Edu_EU_US	C	0,980	0,898	1,000			RTACGGAGCGACTATAAGTCGTATAATTATTTCAAAWGTAAACCATGCGTTACTTGCACATT CTATATAAAAGAAAGCTTCATGAGGCTCTGTTTTMAGTTTCTCGATCCGCCATATTGTTGTAT TGGAAATGTTCACTGTAGCATTTTT[C/T]AAAATAGGTACTCGCATTTCCGGATGTGTCTTTA GACAAAACGATAATATAGATGTTACTATAAAGAAGACGGAAACGACTGCTATCACCTGCAA GATAAATTAAACAATTATAAAATGAAAAATATCAAAAACATAAACTGCATTTA
nuclear	180-soap_C254_p1675	G	0,989	0,989	0,100			ATCTGWTAAGTTAACTTACTTACTGTCTMAAAMTATTGCACTTGTAATATTTGCTGTTGCAC TTAATGCCATGGCACATTATTACARTATTTAGGATCGATTTTAAGGTACGGCAAATATAAAA TATTATTAAACGATTTGCGAGGATTT[G/T]AGTGCAGCTAAGACCGTTCAAAAACATTATTAT TCAAATAWRTTGATATTAAAAGATGACTAAACTCTTGTTCMTGTCGGATAAATTGTCACAA ACATCGCATTAACCCAGACAGATGGYACGRTAACAATAGARAAGGAGTWMTTCC
nuclear	184-soap_C3118_p4466	A	0,938	0,042	0,933			AAACATTTTAAAATTATGAAGATTATCTGAAACTTAAATATGATCCGAATAAGCTCAGTGTT AAACGTACCCTGTCACACAACTCAACAACATCTGATTGGAACTATGTTTTGACAACAATACT GGTTCACACATATTTCAGAGGAAGTG[A/G]GTTATTTGTGAATTTGAAGTCAATCCATCTTG GGTAAATTGAAWTGTAGGATTGASACATGATTTTAATCACATCATATACAAAAATGTCTGA GTTTTACAATGTTCATGTAAATGTAGCTTATAGTCTAAAGTATATGTAGGTGTGA
nuclear	187-soap_C3422_p3286	T	0,970	0,933	0,879			AATAATYAAAGTTATCTTACTGTAACTAAGGAGTCGTYTGTAACGTCTAGGTCGACCCAACT GACATTCCAACTGCTTTTCAAAATTWGACCTGAAGTCTATGTAATGATCCKCTGTCTCTGATT CCACCAAGATAAAATGTGTGTGATC[A/T]GGGTTTARTTCRTGAATATCCTTATTTGGTTTAC AACCTTCATTGGTRAGTGTCAATCCCTCCTGAAAAATAAAAAAATAATTTCTTTTTTAAAAGG GTTTTGTACATATGCATAGGGGTGACACAAGTATCTGACCATGATTTTAAT
nuclear	202-L02_mira_C1_p242	C	0,971	0,194	0,842			GGTGATTTATATGATCATTGTAAACRAGGGWATATACTYGAAAWAGAGGTGCARATTGAT GTACAAAACAAAGAARATTTGTGTATGACAATACTGCTAGTGTTAATGTCTTGWAATATTTT TTTAGATGGGAAAAGGCTCCTTCAAGTA[C/T]GCCTGGGTTTTGGACAAACTSAAGGCWGA GCGTGAACGTGGTATTACCATYGACATTGCTTTGTGGAAGTTTGAGACCACCAAATACTAYG TTACCATTATTGATGCCCCAGGACATAGAGATTTCATCAAGAACATGATCACTGGTG
nuclear	206-R_L04_newbler_C0	T	1,000	0,011	0,922		**X**	RATATCATACCTGGATGGWGGGCCTCTGTCCCTSGAWGGAGGACCWCGATCATAGTCTCT TGACCCATAGTCCCTAGAAGGAGGTGGAGGAGTATAGGCTCTAGACTGTGGGGGATAATC ACGACTGGGGTAATCTCTYGTTGARGCACT[C/T]CTACTAGGGGGCATGCGACTGCAAAACA TRAAACAAAAGCAAACCATGCATTACACTGAAACAGACAMTATACATATATTCATGTATATA CATATTAAATAATCATCTTTCCTKATTTAATTATAAYYGGTTAAATCSTGCATYTTGT

nuclear	210- R_L21_ne wbler_C1	G	0,938	0,011	0,924			GTGGCCTAATAGTATCATAAAACATTGTTAGAAGAATCCTGTACCCTATTAGTATCATGAAA CATTGTTAGAAGAAKTAAGCATGTGGTATCATAGTACATTGWAAGAAAAAGCATGTGGGTC AAATGGTAGCATGATACATTGTTATAA[G/T]AATCATGTGGGTCTTATTGTATCATTATATAT ATAAGGAG
nuclear	404- gi_384575 681	A	0,922	0,000	0,003	**X**	**X**	TCTTGCCATTCTAGTCAGATACCAAAGATGTAAYRYAGCCAAAAATAAACCATTCCCWGAGC TAGATCTCAAGAACTTTGATGGCTTTTCTACTGCCCATCTTGCAGCTATAACACAGAATTGTA ATGCTATGAAAYTGATATCAAARGG[A/G]AAAGGGAATATAAACATGCCYGATGGTAAGAG TGGRAGGACTCCCCTCCACCATGCTGTAGARAGAGAYGATCTTACTACTGTTGGATATCTAA TATTAGAGGCTAGAGCAAATGTAAATGCTTGTTGTTTTGACGGTAATACACCTC
nuclear	409- gi_223026 752	A	1,000	0,806	1,000			AAAATAAATYTGTGAAACTAAATGACCAAGCTGGTCGWAGWAACAAATTATTACAGARTM TTKGTTTRTTTCAGAAAGRTGTCCTTCMAACATTCGTTGTCGTGATGGAGGTTTTGTTGACC AGAAYTGTAGATGTATYTGTCCWGAYGG[A/G]TCACAGAACTGTCAGGAAGGACAACCTGC AAYCGGAWCTGATGCTGAMCAGGAYGATAMTTGTACAAATATGTATGACGAATGGGCCT GTAATGTTTGGGCATCRCAAGGTGAATGTAAAGCAAACAARAARTTYATGCTKACCTCMT
nuclear	417- gi_387154 958	C	0,980	0,447	0,092			GTTCAAGATCATTTATCWGAATGTTTGCARATYTATGGGTTTTGGTCTAAAGACCCTTCAAG RWCRCCCCAAGCCCAWGAACCTCCAGTTTTTGTWAACAAYGAATATCGTGTAGTTGAYCAA GAAARGGGAACTATTACCTGTCARCCC[A/C]AATGYTKGAATGAAGGATGYGAAATGTATG GTGCTCYGTCCATYGCTGGATACTGTCAYAAATGTTTCATGGATTATACCYGWGATTACAAR CGAAATGAAGATGTKGCRGCCCAGARTCGRCAGAYAGAAATGGAACCTACWGCACC
nuclear	419- gi_386354 27	C	0,964	0,255	0,851			AAATTAAACAACTGCACGAGGAGGTCGAATATTTCAAATCTCACCACGTGGCATTTTCTGCT GAACTKACCCATSCTATTGAAAACCTKGSTGCTGAAGAGATTGCTCATTTTGATAAAGTCAGA GTAAACTCTGGASACGCATACCATG[C/T]TGATACTGGAAAATTYGTAGCACCAGAAGAAG GMTTCTTTTATTTCAGTGTCACAATATGCACCAAGARGGACTCCATTTTRGAAATGGCTCTTC ACGTCAACGACCACGATGAAATGATTATTCACGCAGACGCAGAGCATCTWGAA
nuclear	428- gi_384575 681_emb_ HE609049 _p1650	G	1,000	0,952	0,763			ATGGGACAGCCRAGTGTAGTTGAYAGGTTGTTGAATGTTGGAGCYGATCCAACCATGGTTG ACAGAAAAGGCAATTCCCCAGCACATCTTGCCATCTTGTAYGGGGCAGAYTCATGTCTTGCC ATTCTAGTCAGATACCAAAGATGTAAY[A/G]YAGCCAAAAATAAACCATTCCCWGAGCTAG ATCTCAAGAACTTTGATGGCTTTTCTACTGCCCATCTTGCAGCTATAACACAGAATTGTAATG CTATGAAAYTGATATCAAARGGRAAAGGGAATATAAACATGCCYGATGGTAAGAG
nuclear	429- gi_261362 848_gb_Co ntig28358 _p4108	G	1,000	0,995	0,837			TGTTGGAACTCTKGTTGTCTCTGCTAATATAAATGGAWCAATAACAAACTTAAAYRTAATAA GRGGKGACCAAGGARGAGGCTGGCACCTAGGAAARGCATACATTGGACAGAARCTTGGAG CCATCASTTCTCCATTTAGAATGCAACT[G/T]AGTGTCCTTCCTGCAAGRTCATTTGCARCYTC CACTACARATGATGTTGGWATTGATGATATTTCATTYGTWAACTGTGACCARAATGTAGCA CCACCTAAYATWAGTTGTAACTTTGATAGTGGAATATGTAACTGGACYCAAGCTA

nuclear	505-abyss_C723_p2319	C	0,838	0,261	0,058		GTTATTTTAGAATCAAACACAAGAATTTCATCATGCAGYCCAGGRTTRGGATGAATTTCYCTA CCACCCACGCTGACTAATCTCTCGACRAAGCTACGTAACTKGACATTRAATGTTTTTTCTAAM GGTTGTGAATGAGGAACTACGTGATAGTTAAGAGCACTAAGTACCATTTGCCGCAGCTCTG GGTTGGTCATCATCATATCAACCCTTTGAACTGTCTGCACTAAGTCAGCAGGATTTATCAT[T/ C]GGAAATCGTATCARTTTCATTARTTCTATAGCTTGATCTTCCTGGTTACTGTTGAGAAGGA ACCACTCCCAYGTTATATGGAAAATGTCRATCTCCTTCAGACCTAATTGATCACTGTTCAGAC AGTTTACCATTTGTTCATTAGTCARTAAATGTAACGTACCYTCCTTWGATATATGCATTAAAT TTCTGGCTATAAAAACATCAATTTGCTTTAATGCATTGTTCATACTATACAATTTAGCCGT
nuclear	508-soap_C2331_p1911	G	0,924	0,488	0,098		ATATGTTGGTTCCCTAGCAACAAAAAAATATCAAACGTAAGTTAAACAGAGAAGGGACCGG AAACCAGTCAAATAGTCCGAATGAATTAATGGTTTCACTCTTGATAGTTAAAACCTAATGAT TGTCAATGTTATGCTTATTGAAACAAAAATTGTTTGCATTATTTATTATTTTTTAGATGTACTT ATCGCTATTGCATTAGTTATATGGTCACTGTTCCAGACAGAAGCGGTCAGAAATAATAAGG[A/G]TTATAGCATSTATCTAGAAATAWTTKCAGCTGTGMTTTTTTTCCTTTCGGAARTTGTRC TTTATTTACCAATCAAYGCACCCGAKCCTGTYGTYTACYCAGCWWTGCCRCAAACYGTATCT TATATTACTACACAACAGCAATCTTACCGGAACTGGTAATTACATAAAAGCCGGACGTTTCT AAAGAATAATAGAAGATTACCATTTTATCCATACTTATTCTTTTCTGTAAATGACTGCTACTTT A
nuclear	607-loc049_id1314_p3	C	0,971	0,000	0,901	**X**	GTCATCTCTTGGAGGTGAAGGACTTTGGTGGTAATGTGGCATTGGAAACGGATGACCTGCA GGTGGCTGATACCCAGAGGGTGACATAGAGTTCATATGAAATGGATA[T/C]CCAAGTGATC GTGCATGYTGAGGATTAGAGAATATACTGTCTCCATGTTGTCCCGAATGTGGATGTCCTTGG TACAGAGAACGGTTAGGGTATGCCGGGTGAGTCATTCCGTG
nuclear	610-loc094_id166_p10	G	0,967	0,122	0,349	**X**	TCAGCAACCTCAAGTTGCCATCCCTGCAGGAATGGGCCAGTATGCACCGTTTTCACCTACTG TTGCCCCTCCGCCKGCCCATCAGAGTCCACGACATGTCCA[A/G]TAYACGACMCACCCAMT GCCAGCTCATGTTCATCCAGTTTTACAGAGCTCCACCATACCGGCAGTACAGTATCAGCCAC AGTTAGCTTCACAATATGGTGGTCTTG
nuclear	617-loc359_id5887_p8	T	1,000	0,000	0,702		ATAGACAGGAATGTYTWAAAGAATGGTATACAATGTGTAAAGAGAGAAAYAT[T/C]CCAGT ATCTGAAAACTTYTCCCTGCAGGCTACTCTAGGTAACCCTGTCAAAATCAGAGATTGGCAGA TAGCTGGGCTGCCAGTGGACAACTACTCTTT
nuclear	701-C116849_p267	T	1,000	0,563	0,869		TGAAGGGGCTGATAGAATTGAAATGGTGCTCGATGCGGCRAGGCAAATGAAACGGAATCA TGGRTTCCACGACGGKCGCCARTGTATAAARCCTATTGGACAAATTCCCGGAAATAGAGCTA ATTTGGAACACTTTGAACAATCTAGAGC[A/T]TCATCTGCAGACCGTTTTGAAAGTAGRCAA AGAGGTGTWATGAACGAGTTYCCACCTCGWCTGACAAATGGAATTCACAACAGACCGGAA RAAAATATTGTTGAACATTCWAGGGGACACATTTTCCCGGTGTCTGTTAAYCGTTCAG
nuclear	801-C6813_GA36C_p732	C	0,989	0,000	0,193	**X**	GCTCGAGAATTTGTCAGAAGAAGTATAAGACGTATGTCTGGCAGAMGAGGTAAGRATTCR GAAGAAACGAAAGACACTGTAGYATTTTCACCAAARGATACTGACG[C/T]TRGTGTTGGACA AGTTAATTTAGCYTTTGACGATGCTGGWAAAACTGGTTTTGAYAGACAGAATTCAGAATACT

							ACAACTTATCTGCAGGGGACAACGCCGTCGTGTCTGGTCAGACTACTAAATATTCCGTTAAT AATTCTCAATACCC
nuclear	802-C9777_GA36C_p1086	C	0,957	0,000	0,125	**X**	GATCGTGTTTACAAACCGATCGTAAAAATGGAAGATAAAAACAATAATGAGCAAGTTGTTC CAGACGTTTCYATGCCATCTTGCTATCTWACACCAGA[C/T]GCATCACCAGTATCATCTCCYC ARCCATCAAACGATGCCTCTTCAAAGGACATMCATTCRTTTAATCCAGTWTTAGTKGCAAA GTATATTTGTTCGCTRAAGCAGAAACAAATGAATGACACTAATGCT
nuclear	803-C22777_GA36A_p300	T	0,990	0,047	0,206	**X**	GAAACCATTCCAATTTTTAAARAAKTACAAGAATCCATGTTGGCATGAACCTTTATACACCAC RAATGTTTATCAGARCAATAAATACAGTTTACTGTCACCRAATGTTCGTAGCACCAT[C/T]AT TCGTTTRATGACMGAATGGAGCACACGACTTACAAGGGACCAAAYACCYCAAAGACTWAG ATGTTTACCGTATTTCTTTATAATGGACARCCGAAATGTGGAAGTACTGA

Table S3: Results of additional diagnosis methods. Pop: population. N: number of individuals. Unchim: diagnosed as non-chimeric. NMt-Chim: diagnosed as non-*trossulus* chimeric (not due to cancer). Mt-Chim: diagnosed as *trossulus* chimeric (transmissible cancer, MtrBTN2). DN-type: cell type described in results section. NP: not performed.

			Genetics	Histology			Cytology	Flow cytometry	Methods
	Pop	**N**	**Diagnostic**	**Diagnostic**	**DN-type**	**Stage**	**Diagnostic**	**Diagnostic**	
BEFORE GENETIC DIAGNOSIS	L2	**21**	Unchim	-			NP	NP	see method section
	L3	**27**	Unchim	-			NP	NP	see method section
	L5	**1**	NMt-Chim	-			NP	NP	see method section
	L6	**37**	Unchim	-			NP	NP	see method section
		1	Unchim	+	typeB	light	NP	NP	
		6	Unchim	+	typeB	moderate	NP	NP	
		1	Unchim	+	typeB	heavy	NP	NP	
	L9	**1**	Mt-Chim	+	typeA	heavy	NP	NP	see method section
		1	NMt-Chim	-			NP	NP	
		28	Unchim	-			NP	NP	
	L1	**2**	NMt-Chim	-			NP	NP	see method section
		19	Unchim	-			NP	NP	
	L10	**38**	Unchim	-			NP	NP	see method section
	L11	**1**	Mt-Chim	+	typeA	heavy	NP	NP	see method section
	L13	**38**	Unchim	-			NP	NP	see method section
AFTER GENETIC DIAGNOSIS	Arc	**1**	Mt-Chim	NP	NP	NP	NP	+	Benabdelmouna et al. 2018
	CamaretA	**1**	NMt-Chim	+	NP	moderate	+	NP	Burioli et al. 2019
	CamaretB	**1**	Mt-Chim	NP	NP	NP	+	+	Burioli et al. 2019
	Brv	**3**	Mt-Chim	NP	NP	NP	NP	+	Benabdelmouna et al. 2018
	L18	**1**	Mt-Chim	+	typeA	light	NP	NP	see method section
		4	NMt-Chim	-			NP	NP	
	L19	**1**	Mt-Chim	+	typeA	heavy	NP	NP	see method section
	L20	**1**	Mt-Chim	+	typeA	heavy	NP	NP	see method section
	LAN-VIV	**1**	Mt-Chim	+	NP	moderate	+	NP	Burioli et al. 2019
	Pal	**1**	Mt-Chim	NP	NP	NP	NP	+	Benabdelmouna et al. 2018
	STBRI	**1**	Mt-Chim	+	NP	heavy	+	+	Burioli et al. 2019
		1	Mt-Chim	+	NP	moderate	+	+	Burioli et al. 2019

=>> Figure S1 = pdf document (76 pages)

Figure S1: Graphical inference of the 6 MtrBTN2 tumors genotypes at 76 SNPs. (A) KASP fluorescence data plot where genotypes are indicated by colored points. **(B)** Correlation plot between y'_i fluorescence signal and MtFF2 (*M. trossulus* fluorescence fraction 2, proxy of the proportion of cancerous cell in the sample). *M. edulis* samples are represented in red (MtFF2 value close to 0) and *M. trossulus* samples are represented in yellow (MtFF2 value close to 1). In both panels, the 6 tumors are represented in black: triangle filled correspond to hemolymph samples and open triangle to mantle/gill samples (samples from the same individual are related by a pointed line).

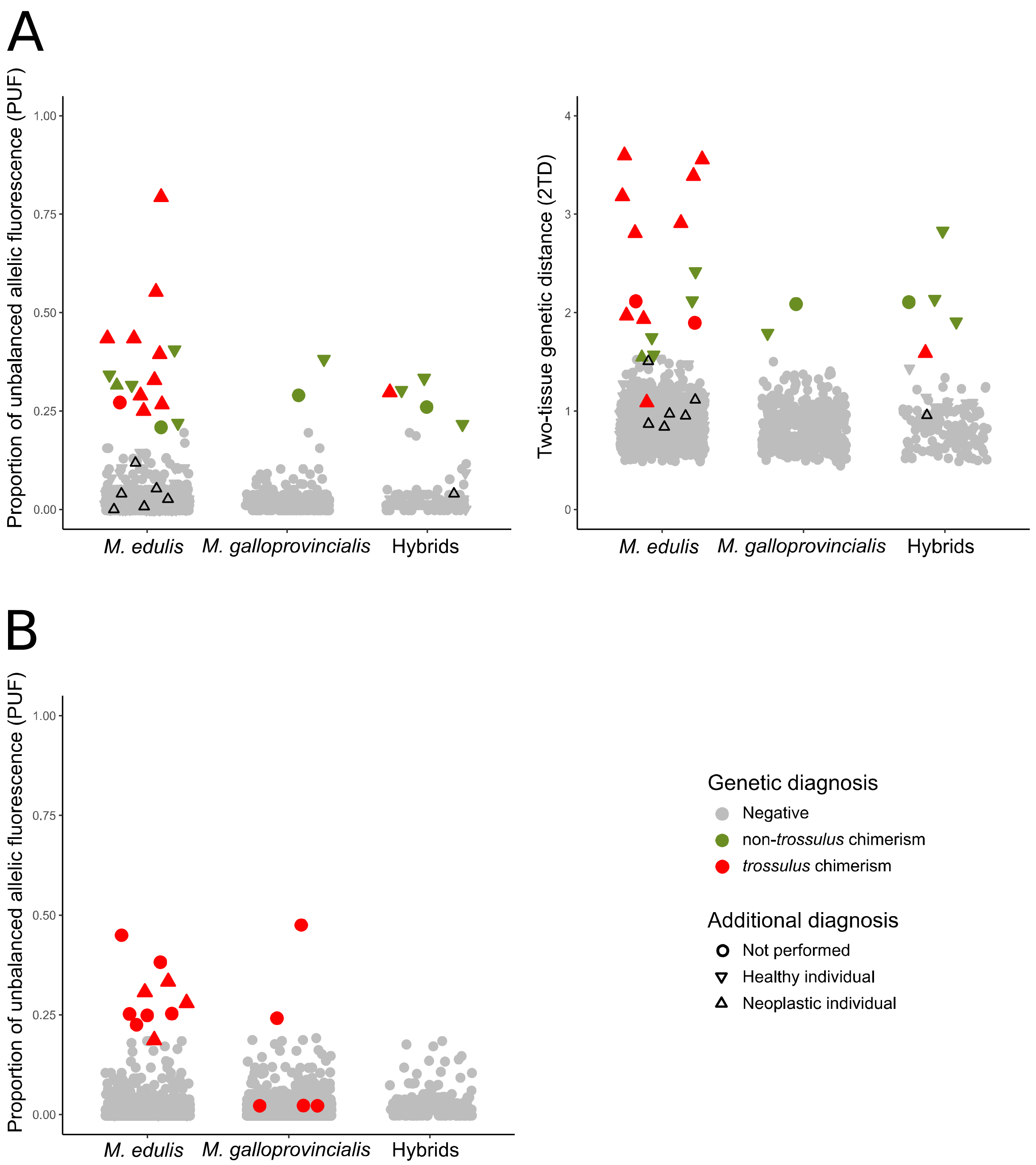

Figure S2: Proportion of unbalanced allelic Fluorescence (PUF) and two-tissue genetic distance (2TD) used for genetic diagnosis. (A) PUF (left) and 2TD (right) values for individuals sampled at two tissues. Color corresponds to genetic diagnosis: red for *trossulus* chimeric individuals (positive to MtF, PUF and mostly 2TD), green for non-*trossulus* chimeric individuals (positive to PUF and 2TD indexes) and grey for non-chimeric individuals (negative to all indexes). The symbol form corresponds to phenotypic diagnosis: triangle pointing up for neoplastic individuals, triangle pointing down for healthy individuals and dot for a not performed phenotype diagnosis. Black triangles pointing up represent neoplastic individuals of type B which are not chimeric (negative to all indexes). **(B)** PUF values for single-sampled individuals. Color corresponds to genetic diagnosis: red for *trossulus* chimerism (positive to MtFF) and non-chimeric individuals (negative to MtFF). The symbol form corresponds to phenotypic diagnosis: triangle pointing up for neoplastic individuals, triangle pointing down for healthy individuals and dot for a not performed phenotype diagnosis.

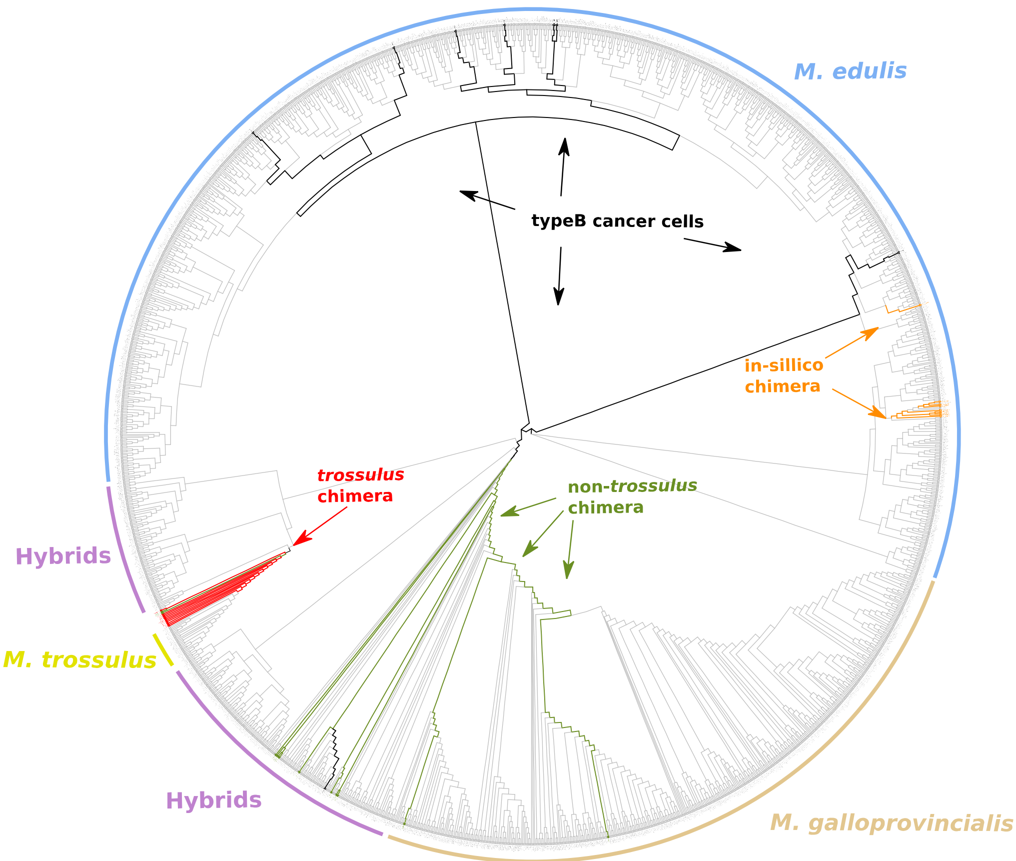

Figure S3: Neighbor-joining Tree estimated on all SNPs fluorescence values (y'_i). Color corresponds to genetic diagnosis: red for *trossulus* chimerism (MtrBTN2), green for non-*trossulus* chimerism, grey for non-chimeric individuals and black for non-chimeric individuals with neoplastic type B cells. Orange branch corresponds to in silico chimera generated by mixing one sample ("cancer") with 9 others samples ("hosts") at 40%, 60% or 80% (3 of each).

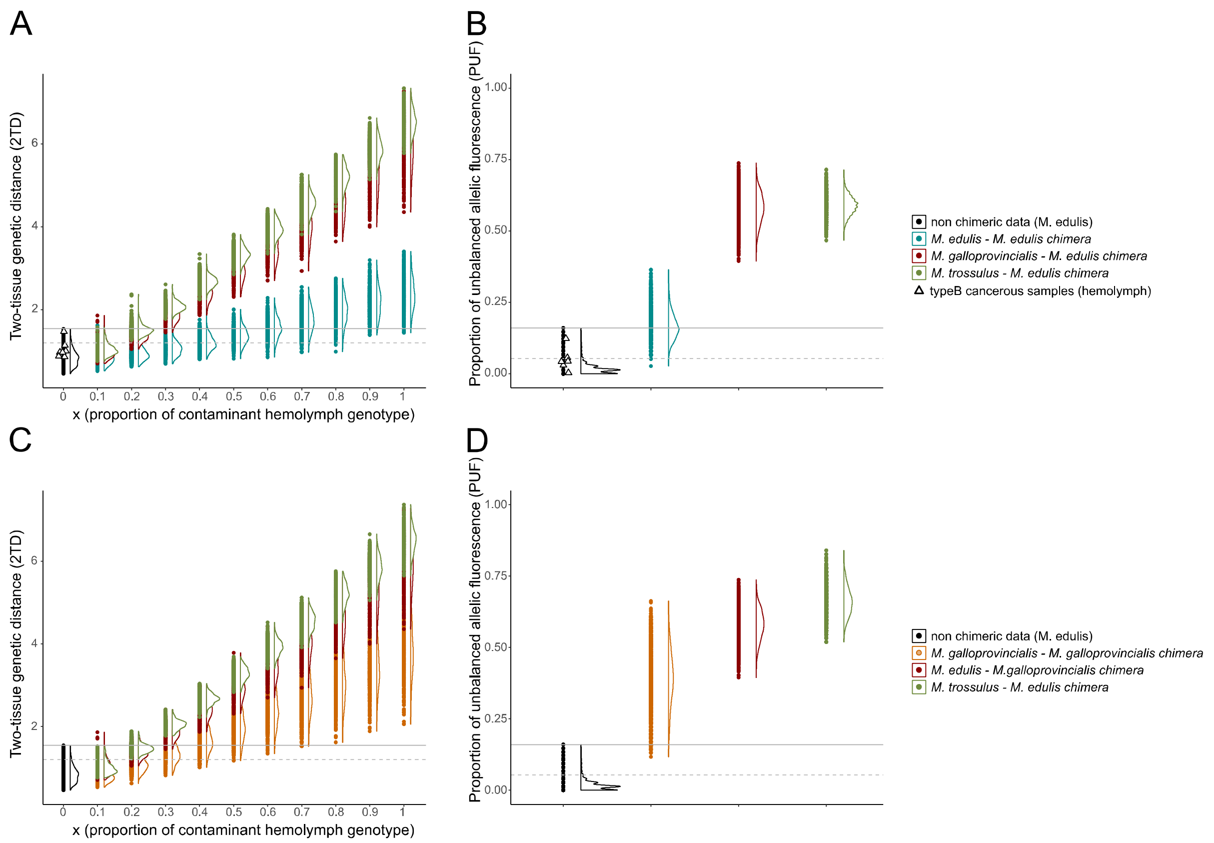

Figure S4: PUF and 2TD estimation of in silico chimera. Panels (A) and (B) correspond to PUF and 2TD values (respectively) estimated for in silico chimera in *M. edulis* « hosts », while panels (C) and (D) correspond to PUF and 2TD values (respectively) estimated for in-silico chimera in *M. galloprovincialis* « hosts ». Colored circles correspond to intraspecific (blue and orange circles) and interspecific (green and red circles) mixed genotypes, black circles corresponds to non-chimeric mussels performed of this study and typeB cancerous samples are reported by black triangle. Curves indicate the distribution of values and grey lines correspond to the maximum (continuous line) and percentile 95% (dotted line) of PUF and 2TD in non-chimeric individuals.

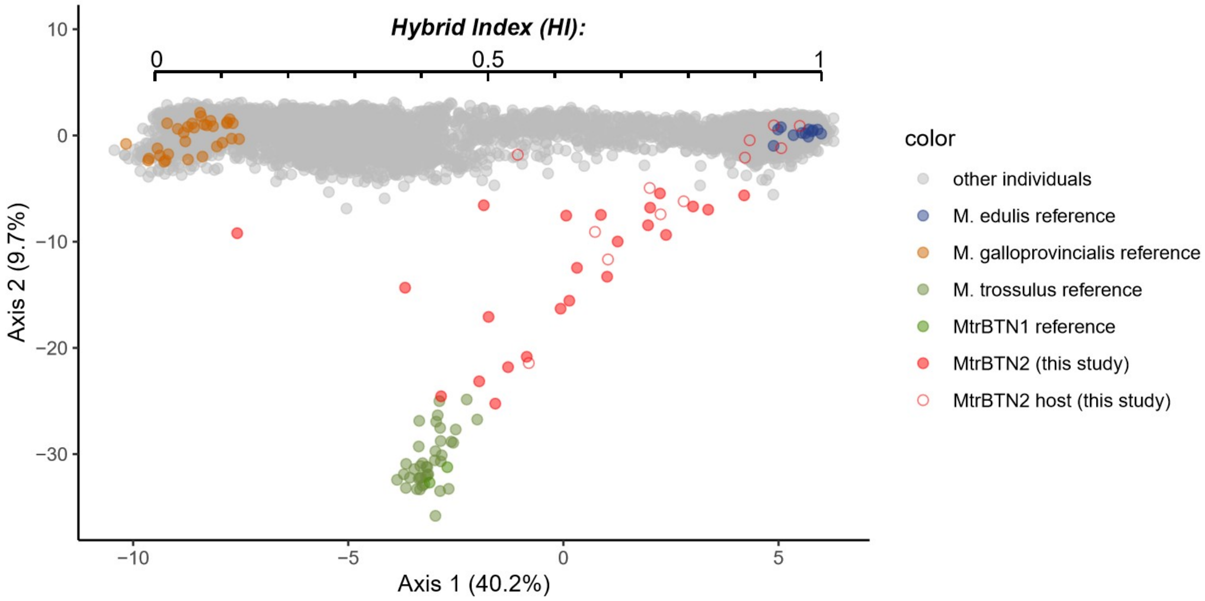

Figure S5: Mussels classification as *M. edulis*, *M. galloprovincialis* or hybrid. PCA on all SNP y'_i values (VAFF). The first axis discriminates *M. edulis* (blue) from *M. galloprovincialis* (orange). We use it to infer a hybrid index and assign the European mussels to *M. edulis* (HI>0.85), *M. galloprovincialis* (HI< 0.4) or hybrids (0.4< HI<0.85) genetic backgrounds.

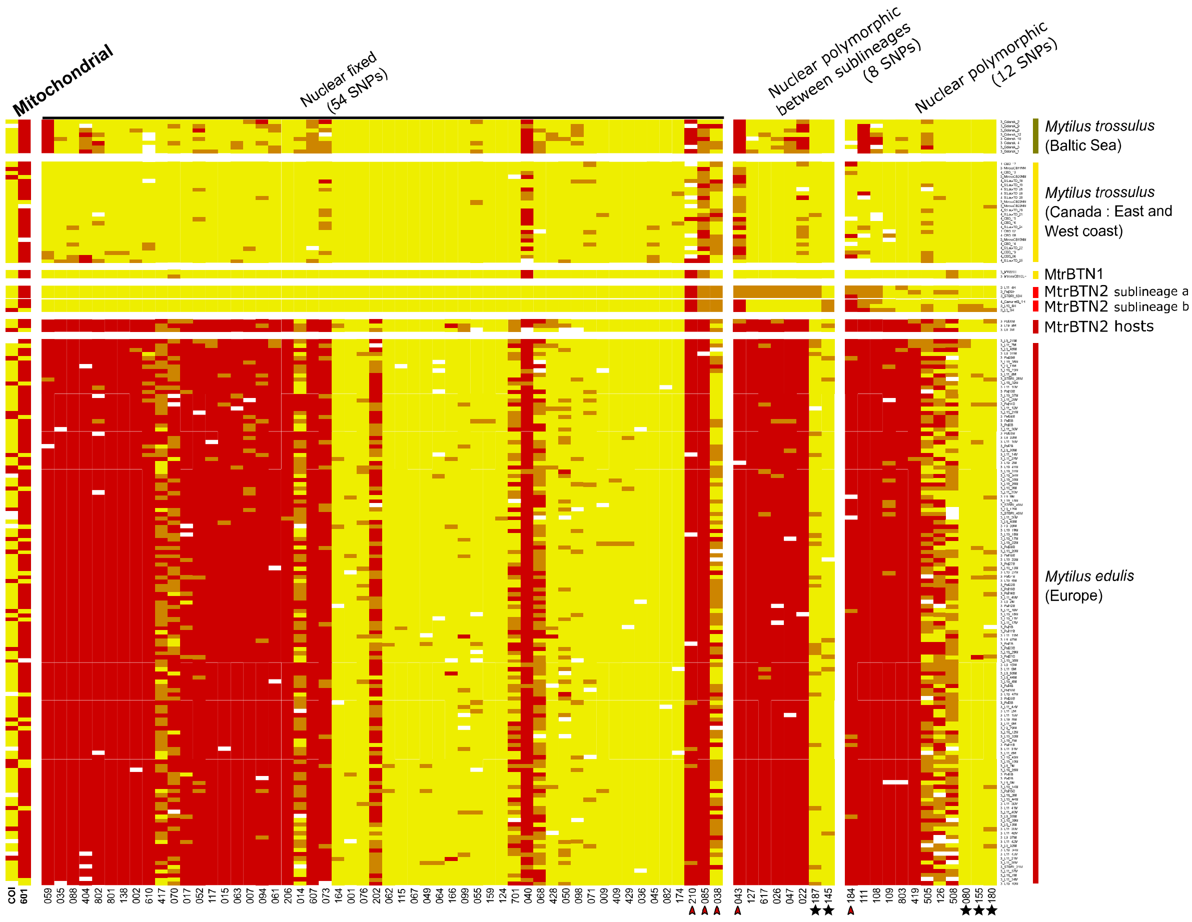

Figure S6: Plot of genotypes for all mitochondrial and nuclear SNPs in column and individuals in rows. Red: homozygote of *edulis*-state allele; yellow: homozygote of *trossulus*-state allele; orange: heterozygote. The first two columns correspond to mitochondrial SNPs, the twelve next to a subset of nuclear SNPs fixed in the 6 MtrBTN2 tumors, then eight SNPs fixed between the two sublineages and then 12 SNPs revealing polymorphism within each sublineages. Red arrowhead pointed the five SNPs with *M. edulis*-state allele excess in the 6 tumors. Black star highlights the five SNPs for which *M.edulis*-state allele in tumors are not explained by the null allele hypothesis.