

- 1 Supplementary table S1. **Full list of recombinant proteins.** The following table lists
- 2 properties of the recombinant proteins used in this study. Components of the recombinant
- 3 protein vaccine are underlined and proteins associated to a protective immune response
- 4 induced by T1/44 vaccination are marked in bold.

ORF	Size (aa)	TM regions	Recombinant ID	Coverage (aa)	Coverage (%)	Molecular mass (kDa)*
MSC_0013	549	0	R13	25-549	95	78.3
MSC_0051	182	1	R51	21-182	89	37.4
MSC_0061	224		R61	26-224	89	41.4
MSC_0079	447		R79	19-447	96	66.3
MSC_0104	59		R104	19-59	69	22.8
<u>MSC_0117</u>	238		R117	26-238	89	42.6
MSC_0122	163		R122	19-155	84	33.6
MSC_0136	322	1	R136	19-298	87	50.7
MSC_0173	194		R173	15-194	93	39.4
MSC_0177	434		R177	13-434	97	66.6
MSC_0187	388	5	R187	268-388	31	30.9
MSC_0198	227		R198	37-202	73	37.3
MSC_0203	236		R203	22-236	91	43.9
MSC_0209	430		R209	28-430	94	64.9
MSC_0240	554		R240	22-554	96	79.6
MSC_0271	651		R271	23-651	97	91.1
MSC_0285	218		R285	29-218	87	40.4
MSC_0292	192	1	R292	55-192	72	34.8
MSC_0298	353	5	R298	209-353	41	35.4
MSC_0317	89		R317	22-89	76	26.1
MSC_0320	289		R320	32-289	89	48.8
MSC_0321	286		R321	32-271	84	46.9
MSC_0322	375		R322	18-375	96	61.6
MSC_0344	93		R344	21-93	79	26.7
MSC_0346	108		R346	29-108	74	27.8
<u>MSC_0364</u>	156		R364	29-156	82	33.9
MSC_0367	101		R367	40-101	61	25.2
MSC_0390	59		R390	24-59	61	22
MSC_0392	114		R392	23-114	81	28.5
MSC_0397	237	1	R397	21-205	78	38.3
MSC_0419	407		R419	23-407	95	63.7
MSC_0422	509	1	R422	33-509	94	72
MSC_0431	356		R431	25-356	93	56.5
MSC_0521	50		R521	32-50	38	20.4
MSC_0540	179		R540	28-179	85	35.2
MSC_0552	205		R552	21-205	90	40
MSC_0570	224		R570	17-224	93	42.2
MSC_0574	238		R574	24-238	90	42.9
MSC_0632	147		R632	26-147	83	32.1
MSC_0653	385		R653	20-385	95	60.3
MSC_0668	407	1	R668	33-407	92	62.2
MSC_0693	120		R693	25-120	80	29.6
MSC_0707	159	1	R707	17-130	72	30.8
MSC_0711	270		R711	19-270	93	46.3
MSC_0754	214	3	R754	27-93	31	25.8
MSC_0755	182		R755	19-182	90	37.1
MSC_0757	253	3	R757	124-253	51	33.8
MSC_0809	292		R809	17-292	95	50.2
MSC_0813	507	1	R813	25-430	80	64.6
MSC_0816	405		R816	23-405	95	62.1

MSC 0844	286		R844	34-286	88	47.9
<u>MSC 0847</u>	257		R847	28-257	89	44.9
MSC 0858	160		R858	29-160	83	33.6
MSC 0906	337	2	R906	36-74	12	22.4
MSC 0910	526	11	R910	271-310	8	22.2
MSC 0922	400		R922	19-400	96	63.8
MSC 0923	276	1	R923	33-276	88	47.2
MSC 0924	310		R924	35-310	89	50.7
MSC 0990	290		R990	25-290	92	48.4
MSC 0992	113		R992	23-113	81	29
MSC 1001	68		R1001	19-68	74	23.5
<u>MSC 1033</u>	80		R1033	22-80	74	25.6
MSC_1046	445		R1046	24-445	95	67.7
MSC 1050	258		R1050	17-258	94	46.6
MSC 1052	152		R1052	17-152	89	34.4
NA	NA		HisABP	1-166	100	18.2

- 1 *Size of recombinant protein (incl. His₆ABP), calculated using the Protparam tool
- 2 (www.expasy.org). NA= not applicable.

1 Supplementary table S2. Complement fixation titers within the three cattle groups, expressed as the reciprocal of serum dilution.

Day	Animal ID														
	<i>T1/44 vaccinated</i>					<i>Purified protein immunized</i>					<i>In contact controls</i>				
	146	178	179	181	192	150	155	161	162	189	145	165	175	177	188
-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-16	60	80	0	0	0	0	0	0	0	0	N/A	N/A	N/A	N/A	N/A
-2	320	160	40	160	40	40	0	0	0	0	0	0	0	0	0
6	160	80	40	160	20	40	0	0	0	0	0	0	0	0	0
11	160	40	40	160	40	40	0	0	0	0	0	0	0	0	0
20	160	40	0	80	0	0	0	0	0	0	0	0	0	0	0
27	160	160	40	160	40	10	0	0	0	0	0	40	0	0	0
34	160	160	40	160	40	40	0	0	40	0	0	40	0	0	0
41	160	160	10	160	40	40	0	0	40	0	0	40	0	0	0
48	80	160	0	80	320	0	0	0	0	40	0	40	0	0	0
55	40	20	20	20	1280	0	0	0	20	320	0	640	0	0	0
62	40	20	10	20	1280	10	0	0	640	1280	0	640	0	0	0
69	20	10	20	10	10240	0	320	0	2560	2560	0	1280	0	0	160
76	80	40	10	0	2560	320	640	0	2560	2560	0	1280	20	0	80
83	40	0	20	0	2560	80	5120	0	5120	1280	0	1280	80	0	160
90	40	20	20	0	1280	320	10240	10	5120	2560	0	1280	320	80	320
97	80	20	20	0	320	640	2560	40	1280	1280	0	1280	640	640	2560
104	40	0	10	0	320	640	1280	10240	1280	1280	40	320	640	5120	5120
111	20	0	0	0	320	640	2560	5120	1280	1280	160	320	640	5120	2560
118	0	0	0	0	320	640	1280	5120	640	640	320	320	320	5120	5120
125	0	0	0	0	160	2560	1280	2560	320	320	640	160	160	5120	1280

2 N/A = Not available.