

Table SI. Clinicopathological characteristics of patients with thymic epithelial tumors subjected to methylation and expression analyses in the present study.

Sample ID	Age, years	Sex	Myasthenia gravis	Koga staging system	Histology	WHO histological classification	Treatment			Methylation (pyrosequence)		RT-qPCR expression	IHC expression
							S	CH	RT	T	N		
1	42	M	-	2	Thymoma	A	S	-	-				°
2	50	F	-	1	Thymoma	A	S	-	-	°			°
3	57	F	+	1	Thymoma	A	S	-	-	°	°	°	°
4	62	M	-	1	Thymoma	A	S	-	-	°			°
5	63	M	-	2	Thymoma	A	S	-	-				°
6	73	M	-	1	Thymoma	A	S	-	-				°
7	80	F	-	1	Thymoma	A	S	-	-	°			
8	80	F	-	2	Thymoma	A	S	-	-				°
9	84	M	-	4b	Thymoma	A	S	-	-	°	°	°	°
10	32	F	-	3	Thymoma	AB	S	-	-				°
11	53	F	+	2	Thymoma	AB	S	-	-				°
12	56	F	+	2	Thymoma	AB	S	-	-				°
13	58	M	-	1	Thymoma	AB	S	-	-				°
14	58	M	-	2	Thymoma	AB	S	-	-				°
15	62	F	-	2	Thymoma	AB	S	-	-		°		°
16	65	F	-	2	Thymoma	AB	S	-	-	°			°
17	65	F	-	1	Thymoma	AB	S	-	-	°			°
18	67	F	+	1	Thymoma	AB	S	-	-			°	
19	71	F	-	1	Thymoma	AB	S	-	-		°		°
20	74	F	-	1	Thymoma	AB	S	-	-				°
21	39	M	-	1	Thymoma	B1	S	-	-				°
22	40	F	-	1	Thymoma	B1	S	-	-				°
23	44	M	-	3	Thymoma	B1	S	post-CH (ADOC)	post-RT				°
24	45	F	+	2	Thymoma	B1	S	-	-	°			°
25	50	F	+	1	Thymoma	B1	S	-	-				°
26	51	F	+	2	Thymoma	B1	S	-	-	°	°		°
27	53	F	-	1	Thymoma	B1	S	-	-				°
28	60	F	-	1	Thymoma	B1	S	-	-				°
29	61	F	+	1	Thymoma	B1	S	-	-				°
30	65	F	-	1	Thymoma	B1	S	-	-	°	°		°
31	65	M	-	3	Thymoma	B1	S	-	-	°	°	°	°
32	70	M	-	3	Thymoma	B1	S	-	-				°
33	71	F	-	2	Thymoma	B1	S	-	-				°
34	72	F	-	1	Thymoma	B1	S	-	-				°
35	72	F	-	1	Thymoma	B1	S	-	-	°			°
36	73	F	-	1	Thymoma	B1	S	-	-				°
37	78	F	-	1	Thymoma	B1	S	-	-				°
38	79	F	-	2	Thymoma	B1	S	-	-				°
39	84	F	-	1	Thymoma	B1	S	-	-			°	
40	27	F	-	4a	Thymoma	B2	S	pre-post-CH (CAMP)	-				°
41	38	F	-	3	Thymoma	B2	S	pre-CH (CAMP)	-	°	°	°	°
42	40	M	+	2	Thymoma	B2	S	-	-	°	°		°
43	40	F	-	2	Thymoma	B2	S	-	-	°	°		°
44	43	F	+	1	Thymoma	B2	S	post-CH (CAMP)	-				°
45	43	M	-	4b	Thymoma	B2	S	-	-	°	°	°	°
46	45	M	-	1	Thymoma	B2	S	-	-				°
47	52	F	+	2	Thymoma	B2	S	-	-	°	°	°	°
48	52	F	-	1	Thymoma	B2	S	-	-			°	°
49	55	M	+	1	Thymoma	B2	S	-	-				°
50	57	F	-	1	Thymoma	B2	S	-	-			°	°
51	58	F	-	1	Thymoma	B2	S	-	-			°	°
52	60	F	-	1	Thymoma	B2	S	-	-	°	°		°
53	65	F	+	1	Thymoma	B2	S	-	-				°
54	65	F	-	2	Thymoma	B2	S	-	-	°	°	°	°
55	65	M	+	4a	Thymoma	B2	S	-	-	°	°	°	°
56	67	F	-	1	Thymoma	B2	S	-	-				°
57	73	F	-	4b	Thymoma	B2	S	pre-CH (ADOC)	-				°

Table SI. Continued.

Sample ID	Age, years	Sex	Myasthenia gravis	Koga staging system	Histology	WHO histological classification	Treatment			Methylation (pyrosequence)		RT-qPCR expression	IHC expression
							S	CH	RT	T	N		
58	74	F	-	2	Thymoma	B2	S	-	-	°	°	°	°
59	75	F	-	2	Thymoma	B2	S	-	-	°	°	°	°
60	28	F	+	4a	Thymoma	B3	S	post-CH (CODE)	post-RT	°	°	°	°
61	36	M	+	4a	Thymoma	B3	S	-	-	°	°	°	°
62	42	F	-	4a	Thymoma	B3	S	post-CT (ADOC)	post-RT	°	°	°	°
63	47	M	-	3	Thymoma	B3	S	pre-post-CH (CAMP)	-	°	°	°	°
64	53	F	-	4a	Thymoma	B3	S	pre-post-CH (CAMP)	-	°	°	°	°
65	62	M	+	1	Thymoma	B3	S	-	-	°	°	°	°
66	64	M	-	2	Thymoma	B3	S	-	-	°	°	°	°
67	66	M	-	1	Thymoma	B3	S	-	-	°	°	°	°
68	68	F	+	2	Thymoma	B3	S	-	-	°	°	°	°
69	68	M	-	2	Thymoma	B3	S	-	-	°	°	°	°
70	72	M	-	4a	Thymoma	B3	S	-	-	°	°	°	°
71	75	F	-	1	Thymoma	B3	S	-	-	°	°	°	°
72	75	M	-	3	Thymoma	B3	S	post-CH (CAMP)	-	°	°	°	°
73	81	F	-	4a	Thymoma	B3	S	-	-	°	°	°	°
74	50	F	+	3	Carcinoma <sup>a</sup>	Squamous cell carcinoma	S	-	-	°	°	°	°
75	48	F	-	3	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
76	51	F	-	3	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
77	51	F	-	2	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
78	55	M	-	2	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
79	55	F	-	2	Carcinoma	Squamous cell carcinoma	S	-	post-RT	°	°	°	°
80	58	F	-	4a	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
81	60	M	-	2	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
82	61	M	-	3	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
83	61	F	-	2	Carcinoma	Squamous cell carcinoma	S	post-CH (ADOC)	post-RT	°	°	°	°
84	62	M	-	3	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
85	66	M	-	2	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
86	68	F	-	2	Carcinoma	Squamous cell carcinoma	S	pre-post-CH (ADOC)	-	°	°	°	°
87	68	F	-	3	Carcinoma	Squamous cell carcinoma	S	post-CH	-	°	°	°	°
88	69	F	-	4b	Carcinoma	Squamous cell carcinoma	S	-	-	°	°	°	°
89	69	M	-	2	Carcinoma	Squamous cell carcinoma	S	post-CH (CP)	-	°	°	°	°
90	67	M	-	4b	Carcinoma	Small cell carcinoma	S	post-CH (cisplatin + etoposide)	post-RT	°	°	°	°

The circles under methylation, RT-qPCR and IHC expression indicate the samples used for the respective analyses. <sup>a</sup>Tumor with both pathology of thymic carcinoma and B2 type thymoma. M, male; F, female; S, surgery; CH, chemotherapy; RT, radiotherapy; pre-, preoperative; post-, postoperative; ADOC, cisplatin + doxorubicin + vincristine + cyclophosphamide; CAMP, cisplatin + doxorubicin + methylprednisolone; CODE, cisplatin + vincristine + doxorubicin + etoposide; CP, carboplatin + paclitaxel; T, tumor; N, normal; RT-qPCR, reverse transcription-quantitative PCR; IHC, immunohistochemical.

Table SII. List of primer sets used for PCR.

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A, TaqMan gene expression assay

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Gene/primer name	Sequence ID
GAD1 (FAM)	Hs01065893_m1
GAPDH (FAM)	Hs02758991_g1

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B, Pyrosequencing for GAD1

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Gene primer name	Sequence
cg15126544	Forward: 5'-TGGTTTTTtaggggttttttttttttGGA-3' Reverse: 5'-ACAAATACACCCCCTTTAATCTACTCTCC-3' Sequence for pyrosequencing: 5'-GTAGAAGAGGGAGGAA-3'

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GAD1, glutamate decarboxylase 1; FAM, fluorescein.

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Table SIII. Evaluation criteria for immunohistochemistry.

Scores	Observation
Proportion score	
0	0% positive cells
1	<30% positive cells
2	30-70% positive cells
3	>70% positive cells
Intensity score	
0	Weak
1	Moderate
2	Strong