

# Supplemental Figure

**GCET1**

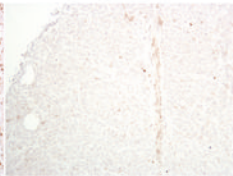
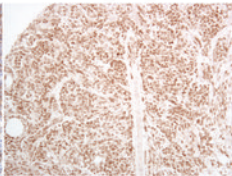
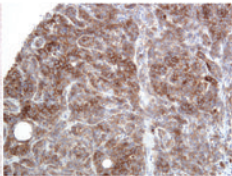
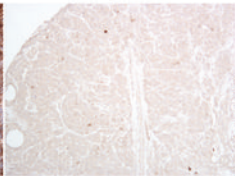
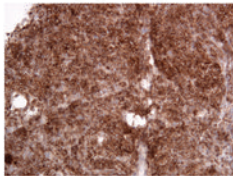
**MUM1**

**CD10**

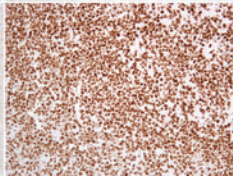
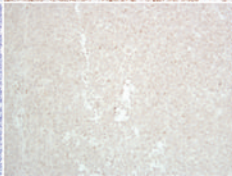
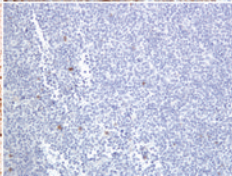
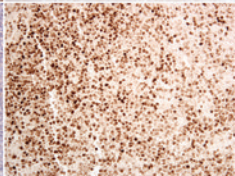
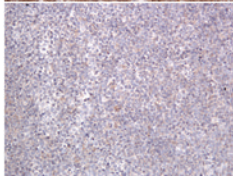
**BCL6**

**FOXP1**

**GCB**



**ABC**



**Supplementary Table 1. Immunohistochemical stain protocols.**

Antibody	Clone	Source	Dilution	Antigen Retrieval		
				Solution	Temperature (°C)	Duration (minutes)
GCET1	RAM341B/C1/C2*	Montes-Moreno <i>et al</i> (2008) <sup>24</sup>	Neat	1mM EDTA (pH 8.0)	115	10
MUM1	MUM1p <sup>†</sup>	Falini <i>et al</i> (2000) <sup>26</sup>	1:10	Cell Conditioning 1 (Ventana) (pH 8.0)	95	30
CD10	56C6	Ventana Medical Systems, Inc.	Neat	Cell Conditioning 1 (Ventana) (pH 8.0)	95	60
BCL6	PG-B6p	Dako A/S	1:60	Cell Conditioning 2 (Ventana) (pH 6.0)	95	30
FOXP1	JC12 <sup>‡</sup>	Banham <i>et al</i> (2001) <sup>27</sup>	1:80	1mM EDTA (pH 8.0)	95	30
MTA3	polyclonal	Fujita <i>et al</i> (2003) <sup>25</sup>	1:1200	0.1M Tris (pH 10.0)	120	60
BCL6	polyclonal	Santa Cruz Biotechnology	1:75	1 mM EDTA (pH 8.0)	95	60
BCL2	124	Dako A/S	1:20	Cell Conditioning 1 (Ventana) (pH 8.0)	95	30
Cyclin D2	polyclonal	Santa Cruz Biotechnology	1:500	1 mM EDTA (pH 8.0)	95	60
CD20	L26	Dako A/S	1:200	Cell Conditioning 1 (Ventana) (pH 8.0)	95	8
CD3	PS1	Ventana Medical Systems, Inc.	Neat	Cell Conditioning 1 (Ventana) (pH 8.0)	95	30

EDTA indicates ethylenediaminetetraacetic acid.

\*A commercial antibody for this clone is now available from Abcam Inc., Cambridge, MA, USA

<sup>†</sup>A commercial antibody for this clone is now available from Dako A/S, Carpinteria, CA, USA.

<sup>‡</sup>A commercial antibody for this clone is now available from Abcam Inc., Cambridge, MA, USA, and Novus Biologicals, Inc., Littleton, CO, USA.

**Supplementary Table 2. Patient characteristics of the training set by gene expression profiling classification.**

		Number (%)	GCB (%)	ABC (%)	P-value
		84	47	37	
Gender	Male	46 (55)	24 (51)	22 (59)	0.440
	Female	38 (45)	23 (49)	15 (41)	
Age (years)	< 60	33 (39)	21 (45)	12 (32)	0.250
	≥ 60	51 (61)	26 (55)	25 (68)	
Karnofsky score	> 70	69 (82)	43 (91)	26 (70)	0.012
	≤ 70	15 (18)	4 (9)	11 (30)	
Stage	I/II	37 (45)	23 (50)	14 (38)	0.270
	III/IV	46 (55)	23 (50)	23 (62)	
Extranodal sites	< 2	69 (84)	36 (77)	33 (94)	0.030
	≥ 2	13 (16)	11 (24)	2 (6)	
LDH	Normal	33 (45)	23 (53)	10 (33)	0.089
	Elevated	40 (55)	20 (47)	20 (67)	
IPI score	Low (0-2)	47 (67)	31 (74)	16 (57)	0.150
	High (3-5)	23 (33)	11 (26)	12 (43)	

LDH indicates lactate dehydrogenase; IPI, International Prognostic Index

**Supplementary Table 3. Clinical characteristics of the validation set by gene expression profiling classification.**

		Number (%)	GCB (%)	ABC (%)	P-value
		63	37	26	
Gender	Male	29 (46)	15 (41)	14 (54)	0.300
	Female	34 (54)	22 (59)	12 (46)	
Age (years)	< 60	29 (46)	21 (57)	8 (31)	0.071
	≥ 60	34 (54)	16 (43)	18 (69)	
Karnofsky Score	> 70	49 (83)	32 (91)	17 (71)	0.074
	≤ 70	10 (17)	3 (9)	7 (29)	
Stage	I/II	30 (50)	21 (60)	9 (36)	0.120
	III/IV	30 (50)	14 (40)	16 (64)	
Extranodal sites	< 2	50 (88)	30 (91)	20 (83)	0.440
	≥ 2	7 (12)	3 (9)	4 (17)	
LDH	Normal	19 (40)	14 (48)	5 (26)	0.130
	Elevated	29 (60)	15 (52)	14 (74)	
IPI score	Low (0-2)	27 (61)	20 (74)	7 (41)	0.055
	High (3-5)	17 (39)	7 (26)	10 (59)	

LDH indicates lactate dehydrogenase; IPI, International Prognostic Index

**Supplementary Table 4. The percentages of positive cases for each immunostain in the GEP-defined subtypes of DLBCL.** All positive results were defined as at least 30% of the lymphoma cells staining positive, except for GCET1, MUM1 and FOXP1, for which at least 80% of the positive lymphoma cells were required for a positive result.

	GCET1 (%)	CD10 (%)	Mono BCL6 (%)	Poly BCL6 (%)	MTA3 (%)	MUM1 (%)	FOXP1 (%)	BCL2 (%)	Cyclin D2 (%)
GCB (n=47)	57	57	89	83	67	6	30	50	0
ABC (n=37)	8	5	62	35	57	53	73	59	32
Unclassified (GCB by the new algorithm) (n=7)	14	43	86	29	43	14	14	43	0
Unclassified (ABC by the new algorithm) (n=12)	0	0	25	25	25	0	25	25	17
PMBL (n=7)	43	14	71	43	29	14	0	29	0