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Lampiran 1

Tabel L 1. Indeks antigenisitas dari substitusi asam amino pada HBsAg dari VHB genotipe B di bayi

Amino Acid Position	Genotype B reference		SN 434		SN 288		SN 1016		SN 1031		SN 3555		SN 3500, 3510, 3551, 3554	
			(T126I, T143S, Y161F)		(T118N)		(L175S)		(K122R, P135H)		(K122R, T143S)		(K122R)	
117	Ser	0.7	Ser	0.7	Ser	1.3	Ser	0.7	Ser	0.7	Ser	0.7	Ser	0.7
118	Thr	0.8	Thr	0.8	**Asn**	**0.8**	Thr	0.8	Thr	0.8	Thr	0.8	Thr	0.8
119	Gly	1.65	Gly	1.65	Gly	1.85	Gly	1.65	Gly	1.65	Gly	1.65	Gly	1.65
120	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.1
121	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.5
122	Lys	2.25	Lys	2.25	Lys	2.25	Lys	2.25	**Arg**	**2.25**	**Arg**	**2.25**	**Arg**	**2.25**
123	Thr	1	Thr	1	Thr	1	Thr	1	Thr	1	Thr	1	Thr	1
124	Cys	0.9	Cys	0.2	Cys	0.5	Cys	0.9	Cys	0.9	Cys	0.9	Cys	0.9
125	Thr	0.7	Thr	-0.05	Thr	0.7	Thr	0.7	Thr	0.7	Thr	0.7	Thr	0.7
126	Thr	0.25	**Ile**	**-0.6**	Thr	0.25	Thr	0.25	Thr	0.45	Thr	0.45	Thr	0.45
127	Pro	0.6	Pro	-0.4	Pro	0.6	Pro	0.6	Pro	0.6	Pro	0.6	Pro	0.6
128	Ala	0.8	Ala	0.35	Ala	0.8	Ala	0.8	Ala	0.8	Ala	0.8	Ala	0.8
129	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8
130	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65
131	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35
132	Ser	0.35	Ser	0.15	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
133	Met	0.2	Met	0	Met	0.2	Met	0.2	Met	0.2	Met	0.2	Met	0.2
134	Phe	0.2	Phe	0.2	Phe	0.2	Phe	0.2	Phe	0	Phe	0.2	Phe	0.2
	)	0.2	Pro	0.2	Pro	0.2	Pro	0.2	**His**	**0.2**	Pro	0.2	Pro	0.2
	r	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2
	s	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2
	s	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.84	Cys	0.64	Cys	0.64
	s	1.18	Cys	0.98	Cys	1.18	Cys	1.18	Cys	1.18	Cys	0.98	Cys	1.18

Amino Acid Position	Genotype B reference		SN 434		SN 288		SN 1016		SN 1031		SN 3555		SN 3500, 3510, 3551, 3554	
			(T126I, T143S, Y161F)		(T118N)		(L175S)		(K122R, P135H)		(K122R, T143S)		(K122R)	
140	Thr	1.67	Thr	1.47	Thr	1.67	Thr	1.67	Thr	1.67	Thr	1.47	Thr	1.67
141	Lys	2.76	Lys	2.86	Lys	2.76	Lys	2.76	Lys	2.76	Lys	2.86	Lys	2.76
142	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4
143	Thr	2.86	**Ser**	**3.06**	Thr	2.86	Thr	2.86	Thr	2.86	**Ser**	**3.06**	Thr	2.86
144	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57
145	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93
146	Asn	1.59	Asn	1.19	Asn	1.59	Asn	1.59	Asn	1.59	Asn	1.19	Asn	1.59
147	Cys	0.5	Cys	0.1	Cys	0.5	Cys	0.5	Cys	0.5	Cys	0.1	Cys	0.5
148	Thr	-0.2	Thr	-0.6	Thr	-0.2	Thr	-0.2	Thr	-0.2	Thr	-0.6	Thr	-0.2
149	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6
150	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6
151	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6
152	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25
153	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15
154	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
155	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
156	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0
157	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4
158	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4
159	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4
160	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4
		-0.25	**Phe**	**-0.4**	Tyr	-0.25	Tyr	-0.25	Tyr	-0.25	Tyr	-0.25	Tyr	-0.25
		-0.25	Leu	-0.4	Leu	-0.25	Leu	-0.25	Leu	-0.25	Leu	-0.25	Leu	-0.25
		-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4
		-0.2	Glu	-0.6	Glu	-0.2	Glu	-0.2	Glu	-0.2	Glu	-0.2	Glu	-0.2
		-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2

Amino Acid Position	Genotype B reference		SN 434		SN 288		SN 1016		SN 1031		SN 3555		SN 3500, 3510, 3551, 3554	
			(T126I, T143S, Y161F)		(T118N)		(L175S)		(K122R, P135H)		(K122R, T143S)		(K122R)	
166	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1
167	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1
168	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4
169	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2
170	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2
171	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2
172	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2
173	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
174	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4
175	Leu	-0.4	Leu	-0.4	Leu	-0.4	**Ser**	**-0.4**	Leu	-0.4	Leu	-0.4	Leu	-0.4
176	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
177	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.1	Val	-0.4	Val	-0.4	Val	-0.4
178	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4
179	Phe	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4
180	Val	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4

Asam amino dan indeks antigenisitasnya ditandai dengan **huruf tebal,** substitusi asam amino dan indeks antigenisitasnya diberi tanda kuning

Lampiran 2

Tabel L 2. Indeks antigenisitas dari substitusi asam amino dari HBsAg VHB genotipe C di bayi

Posisi Asam Amino	Referensi Genotipe C		SN 128 (F179V, V180D)		SN 305 (P127T, F179V)		SN 416 (I126T, M133I, F134L)		SN 424 (F179V)		SN 1084 (R160K)		SN 2890 (S143T, R160K)		SN 2896 (P127T, F179V)	
117	Ser	0.7	Ser	0.7	-	-	Ser	0.7	Ser	0.7	Ser	0.7	Ser	0.7	Ser	0.7
118	Thr	0.8	Thr	0.8	-	-	Thr	0.8	Thr	0.8	Thr	0.8	Thr	0.8	Thr	0.8
119	Gly	1.65	Gly	1.65	Gly	1.56	Gly	1.65	Gly	1.65	Gly	1.65	Gly	1.65	Gly	1.56
120	Pro	2.1	Pro	2.1	Pro	1.98	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.1	Pro	1.98
121	Cys	2.5	Cys	2.5	Cys	2.2	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.2
122	Lys	2.25	Lys	2.25	Lys	1.98	Lys	2.25	Lys	2.25	Lys	2.25	Lys	2.25	Lys	1.98
123	Thr	1	Thr	1	Thr	0.51	Thr	1	Thr	0.6	Thr	1	Thr	1	Thr	0.51
124	Cys	0.2	Cys	0.2	Cys	0.14	Cys	0.9	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.14
125	Thr	-0.05	Thr	-0.05	Thr	-0.08	Thr	0.7	Thr	-0.05	Thr	-0.05	Thr	-0.05	Thr	-0.08
126	Ile	-0.6	Ile	-0.6	Ile	-0.6	**Thr**	**0.25**	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6
127	Pro	-0.4	Pro	-0.4	**Thr**	**-0.6**	Pro	0.6	Pro	-0.6	Pro	-0.4	Pro	-0.4	**Thr**	**-0.6**
128	Ala	0.35	Ala	0.35	Ala	-0.05	Ala	0.8	Ala	0.35	Ala	0.35	Ala	0.35	Ala	-0.05
129	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8
130	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.25	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65
131	Thr	0.35	Thr	0.35	Thr	0.35	Thr	-0.05	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35
132	Ser	0.15	Ser	0.15	Ser	0.15	Ser	-0.05	Ser	0.15	Ser	0.15	Ser	0.15	Ser	0.15
133	Met	0	Met	0	Met	0	**Ile**	**-0.05**	Met	0	Met	0	Met	0	Met	0
134	Phe	0.2	Phe	0.2	Phe	-0.2	**Leu**	**-0.2**	Phe	-0.2	Phe	0.2	Phe	0.2	Phe	-0.2
		0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2
		0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2
		0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2
		0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64
		0.98	Cys	0.98	Cys	0.98	Cys	0.98	Cys	0.98	Cys	0.98	Cys	1.18	Cys	0.98

Posisi Asam Amino	Referensi Genotipe C		SN 128		SN 305		SN 416		SN 424		SN 1084		SN 2890		SN 2896	
			(F179V, V180D)		(P127T, F179V)		(I126T, M133I, F134L)		(F179V)		(R160K)		(S143T, R160K)		(P127T, F179V)	
140	Thr	1.47	Thr	1.47	Thr	1.47	Thr	1.47	Thr	1.47	Thr	1.47	Thr	1.67	Thr	1.47
141	Lys	2.86	Lys	2.86	Lys	2.46	Lys	2.86	Lys	2.46	Lys	2.86	Lys	2.76	Lys	2.46
142	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4
143	Ser	3.06	Ser	3.06	Ser	3.06	Ser	3.06	Ser	3.06	Ser	3.06	Thr	2.86	Ser	3.06
144	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57
145	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93
146	Asn	1.19	Asn	1.19	Asn	1.19	Asn	1.19	Asn	1.19	Asn	1.19	Asn	1.59	Asn	1.19
147	Cys	0.1	Cys	0.1	Cys	-0.3	Cys	0.1	Cys	-0.3	Cys	0.1	Cys	0.5	Cys	-0.3
148	Thr	-0.6	Thr	-0.6	Thr	-0.6	Thr	-0.6	Thr	-0.6	Thr	-0.6	Thr	-0.2	Thr	-0.6
149	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6
150	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6
151	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6
152	Ile	-0.25	Ile	-0.25	Ile	-0.45	Ile	-0.25	Ile	-0.45	Ile	-0.25	Ile	-0.25	Ile	-0.45
153	Pro	0.15	Pro	0.15	Pro	-0.05	Pro	0.15	Pro	-0.05	Pro	0.15	Pro	0.15	Pro	-0.05
154	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
155	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
156	Trp	0	Trp	0	Trp	-0.2	Trp	0	Trp	-0.2	Trp	0	Trp	0	Trp	-0.2
157	Ala	-0.4	Ala	-0.4	Ala	-0.6	Ala	-0.4	Ala	-0.6	Ala	-0.4	Ala	-0.4	Ala	-0.6
158	Phe	-0.4	Phe	-0.4	Phe	-0.6	Phe	-0.4	Phe	-0.6	Phe	-0.4	Phe	-0.4	Phe	-0.6
159	Ala	-0.4	Ala	-0.4	Ala	-0.6	Ala	-0.4	Ala	-0.6	Ala	-0.4	Ala	-0.4	Ala	-0.6
		-0.4	Arg	-0.4	Arg	-0.6	Arg	-0.4	Arg	-0.6	**Lys**	**-0.4**	**Lys**	**-0.4**	Arg	-0.6
		-0.4	Phe	-0.4	Phe	-0.6	Phe	-0.4	Phe	-0.6	Phe	-0.4	Phe	-0.4	Phe	-0.6
		-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
		-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4
		-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.6	Glu	-0.6	Glu	-0.4

Posisi Asam Amino	Referensi Genotipe C		SN 128		SN 305		SN 416		SN 424		SN 1084		SN 2890		SN 2896	
			(F179V, V180D)		(P127T, F179V)		(I126T, M133I, F134L)		(F179V)		(R160K)		(S143T, R160K)		(P127T, F179V)	
165	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2
166	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1
167	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1
168	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4
169	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2
170	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2
171	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2
172	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2
173	Leu	-0.4	Leu	-0.6	Leu	-0.6	Leu	-0.4	Leu	-0.6	Leu	-0.4	Leu	-0.4	Leu	-0.6
174	Ser	-0.4	Ser	-0.6	Ser	-0.6	Ser	-0.4	Ser	-0.6	Ser	-0.4	Ser	-0.4	Ser	-0.6
175	Leu	-0.4	Leu	-0.6	Leu	-0.6	Leu	-0.4	Leu	-0.6	Leu	-0.4	Leu	-0.4	Leu	-0.6
176	Leu	-0.4	Leu	-0.3	Leu	-0.6	Leu	-0.4	Leu	-0.6	Leu	-0.4	Leu	-0.4	Leu	-0.6
177	Val	-0.4	Val	-0.3	Val	-0.6	Val	-0.4	Val	-0.6	Val	-0.4	Val	-0.4	Val	-0.6
178	Pro	-0.4	Pro	-0.6	Pro	-0.6	Pro	-0.4	Pro	-0.6	Pro	-0.4	Pro	-0.4	Pro	-0.6
179	Phe	-0.6	**Val**	**-0.6**	**Val**	**-0.6**	-	-	**Val**	**-0.6**	-	-	-	-	**Val**	**-0.6**
180	Val	-0.6	**Asp**	**-0.6**	-	-	-	-	Val	-0.6	-	-	-	-	-	-

Asam amino dan indeks antigenisitasnya ditandai dengan **huruf tebal,** substitusi asam amino dan indeks antigenisitasnya diberi tanda kuning

Lampiran 3

Tabel L 3. Indeks antigenisitas dari substitusi asam amino dari HBsAg VHB genotipe C pada sampel ibu dan tali pusat

Posisi Asam Amino	**Referensi Genotipe B**		**SMB 137**		**SCB 137**		**SCB 424**		**SMB 1031**		**SMB 1084**		**SMB 288, SCB 288, SCB 1031, SCB 1084, SMB (3500, 3500, 3510, 3551, 3554, 3555) SCB (3500, 3510, 3551, 3554) SCB 3555**		**SMB 1016, SCB 1016**	
			(T123S)		(T140I)		(A166D)		(P120T, K122R)		(K122R, V177M)		(K122R)		(L175S)	
117	Ser	0.7	-	-	-	-	Ser	0.7	Ser	1.09	Ser	0.7	Ser	0.7	Ser	0.7
118	Thr	0.8	-	-	-	-	Thr	0.8	Thr	1.16	Thr	0.8	Thr	0.8	Thr	0.8
119	Gly	1.65	-	-	-	-	Gly	1.65	Gly	1.98	Gly	1.65	Gly	1.65	Gly	1.65
120	Pro	2.1	-	-	-	-	Pro	2.1	**Thr**	**2.2**	Pro	2.1	Pro	2.1	Pro	2.1
121	Cys	2.5	-	-	-	-	Cys	2.5	Cys	1.13	Cys	2.5	Cys	2.5	Cys	2.5
122	Lys	2.25	-	-	-	-	Lys	2.25	**Arg**	**0.91**	**Arg**	**2.25**	**Arg**	**2.25**	Lys	2.25
123	Thr	1	**Ser**	**0.1**	-	-	Thr	1	Thr	0.69	Thr	1	Thr	1	Thr	1
124	Cys	0.9	Cys	0.1	Cys	0.3	Cys	0.9	Cys	0.62	Cys	0.9	Cys	0.9	Cys	0.9
125	Thr	0.7	Thr	-0.1	Thr	0.1	Thr	0.7	Thr	0.65	Thr	0.7	Thr	0.7	Thr	0.7
126	Thr	0.25	Thr	0.3	Thr	0.3	Thr	0.25	Thr	0.45	Thr	0.45	Thr	0.45	Thr	0.25
127	Pro	0.6	Pro	0.6	Pro	0.45	Pro	0.6	Pro	0.6	Pro	0.6	Pro	0.6	Pro	0.6
128	Ala	0.8	Ala	0.8	Ala	0.8	Ala	0.8	Ala	0.8	Ala	0.8	Ala	0.8	Ala	0.8
129	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8
[illegible]	[illegible]ly	0.65	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65
[illegible]	[illegible]r	0.35	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35
[illegible]	[illegible]er	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
[illegible]	[illegible]et	0.2	Met	0.2	Met	0.2	Met	0.2	Met	0.2	Met	0.2	Met	0.2	Met	0.2
[illegible]	[illegible]e	0.2	Phe	0.2	Phe	0.2	Phe	0.2	Phe	0.2	Phe	0.2	Phe	0.2	Phe	0.2

Posisi Asam Amino	Referensi Genotipe B		SMB 137		SCB 137		SCB 424		SMB 1031		SMB 1084		SMB 288, SCB 288, SCB 1031, SCB 1084, SMB (3500, 3500, 3510, 3551, 3554, 3555) SCB (3500, 3510, 3551, 3554) SCB 3555		SMB 1016, SCB 1016	
			(T123S)		(T140I)		(A166D)		(P120T, K122R)		(K122R, V177M)		(K122R)		(L175S)	
135	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2
136	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2
137	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2
138	Cys	0.64	Cys	0.64	Cys	0.1	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64
139	Cys	1.18	Cys	1.18	Cys	0.1	Cys	1.18	Cys	1.18	Cys	1.18	Cys	1.18	Cys	1.18
140	Thr	1.67	Thr	1.67	**Ile**	**0.41**	Thr	1.67	Thr	1.67	Thr	1.67	Thr	1.67	Thr	1.67
141	Lys	2.76	Lys	2.76	Lys	1.47	Lys	2.76	Lys	2.76	Lys	2.76	Lys	2.76	Lys	2.76
142	Pro	3.4	Pro	3.4	Pro	2.13	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4
143	Thr	2.86	Thr	2.86	Thr	2.74	Thr	2.86	Thr	2.86	Thr	2.86	Thr	2.86	Thr	2.86
144	Asp	2.57	Asp	2.57	Asp	3.1	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57
145	Gly	1.93	Gly	1.93	Gly	2.49	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93
146	Asn	1.59	Asn	1.59	Asn	2.18	Asn	1.59	Asn	1.59	Asn	1.59	Asn	1.59	Asn	1.59
147	Cys	0.5	Cys	0.5	Cys	1.12	Cys	0.5	Cys	0.5	Cys	0.5	Cys	0.5	Cys	0.5
148	Thr	-0.2	Thr	-0.2	Thr	0.11	Thr	-0.2	Thr	-0.2	Thr	-0.2	Thr	-0.2	Thr	-0.2
149	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6
150	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6
151	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6
	e	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25
	o	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15
	er	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
	er	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35
	p	0	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0

Posisi Asam Amino	Referensi Genotipe B		SMB 137		SCB 137		SCB 424		SMB 1031		SMB 1084		SMB 288, SCB 288, SCB 1031, SCB 1084, SMB (3500, 3500, 3510, 3551, 3554, 3555) SCB (3500, 3510, 3551, 3554) SCB 3555		SMB 1016, SCB 1016	
			(T123S)		(T140I)		(A166D)		(P120T, K122R)		(K122R, V177M)		(K122R)		(L175S)	
157	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4
158	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4
159	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4
160	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4	Lys	-0.4
161	Tyr	-0.25	Tyr	-0.25	**Phe**	-0.4	Tyr	-0.25	Tyr	-0.25	Tyr	-0.25	Tyr	-0.25	Tyr	-0.25
162	Leu	-0.25	Leu	-0.25	Leu	-0.4	Leu	-0.05	Leu	-0.25	Leu	-0.25	Leu	-0.25	Leu	-0.25
163	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	0.1	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4
164	Glu	-0.2	Glu	-0.2	Glu	-0.6	Glu	-0.2	Glu	-0.2	Glu	-0.2	Glu	-0.2	Glu	-0.2
165	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2
166	Ala	-0.1	Ala	-0.1	Ala	-0.1	**Asp**	**0.85**	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1
167	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	0.5	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1
168	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.1	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4
169	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	0.1	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2
170	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2
171	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2
172	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2
173	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
	er	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.2	Ser	-0.4
	eu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.2	**Ser**	**-0.4**
	eu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
	al	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	**Met**	**-0.4**	Val	-0.4	Val	-0.1
	o	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.2	Pro	-0.4

Posisi Asam Amino	Referensi Genotipe B		SMB 137		SCB 137		SCB 424		SMB 1031		SMB 1084		SMB 288, SCB 288, SCB 1031, SCB 1084, SMB (3500, 3500, 3510, 3551, 3554, 3555) SCB (3500, 3510, 3551, 3554) SCB 3555		SMB 1016, SCB 1016	
			(T123S)		(T140I)		(A166D)		(P120T, K122R)		(K122R, V177M)		(K122R)		(L175S)	
179	Phe	-0.6														
180	Val	-0.6														

Asam amino dan indeks antigenisitasnya ditandai dengan **huruf tebal,** substitusi asam amino dan indeks antigenisitasnya diberi tanda kuning

Lampiran 4

Tabel L 4. Indeks antigenisitas dari substitusi asam amino amino dari HBsAg VHB genotipe C pada sampel ibu dan tali pusat

Posisi Asam Amino	Referensi Genotipe C		SCB 128		SMB 305		SMB 416		SCB 416		SMB 2896		SCB 2896		SCB 2890		SMB 2223	
			(F179V, V180D)		(P127T)		(I126T, M133I, F134Y)		(I126T, M133I, F134Y)		(S143T, V177M)		(P127T, V177M, F179D)		(S143T, G145E, R160K)		(V177M)	
117	Ser	0.7	Ser	0.7	Ser	0.7	Ser	0.7	Ser	0.7	-	-	Ser	0.7	Ser	0.7	Ser	0.7
118	Thr	0.8	Thr	0.8	Thr	0.8	Thr	0.8	Thr	0.8	-	-	Thr	0.8	Thr	0.8	Thr	0.8
119	Gly	1.65	Gly	1.65	Gly	1.65	Gly	1.65	Gly	1.65	Gly	1.98	Gly	1.65	Gly	1.65	Gly	1.65
120	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.1	Pro	2.2	Pro	2.1	Pro	2.1	Pro	2.1
121	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.5	Cys	2.5	Cys	1.98	Cys	2.5	Cys	2.5	Cys	2.5
122	Lys	2.25	Lys	2.25	Lys	2.25	Lys	2.25	Lys	2.25	Lys	1.76	Lys	2.25	Lys	2.25	Arg	2.25
123	Thr	1	Thr	0.6	Thr	1	Thr	1	Thr	1	Thr	0.69	Thr	1	Thr	1	Thr	1
124	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.9	Cys	0.9	Cys	-0.08	Cys	0.2	Cys	0.2	Cys	0.9
125	Thr	-0.05	Thr	-0.05	Thr	-0.05	Thr	0.7	Thr	0.7	Thr	-0.3	Thr	-0.05	Thr	-0.05	Thr	0.7
126	Ile	-0.6	Ile	-0.6	Ile	-0.6	**Thr**	**0.25**	**Thr**	**0.25**	Ile	-0.6	Ile	-0.6	Ile	-0.6	Thr	0.45
127	Pro	-0.4	Pro	-0.6	**Thr**	**-0.6**	Pro	0.6	Pro	0.6	Pro	-0.4	**Thr**	**-0.6**	Pro	-0.4	Pro	0.6
128	Ala	0.35	Ala	0.35	Ala	0.35	Ala	0.8	Ala	0.8	Ala	0.35	Ala	0.35	Ala	0.35	Ala	0.8
129	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8	Gln	0.8
130	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.25	Gly	0.25	Gly	0.65	Gly	0.65	Gly	0.65	Gly	0.65
131	Thr	0.35	Thr	0.35	Thr	0.35	Thr	-0.05	Thr	-0.05	Thr	0.35	Thr	0.35	Thr	0.35	Thr	0.35
132	Ser	0.15	Ser	0.15	Ser	0.15	Ser	-0.05	Ser	-0.05	Ser	0.15	Ser	0.15	Ser	0.15	Ser	0.35
133	Met	0	Met	0	Met	0	**Ile**	**0.1**	**Ile**	**0.1**	Met	0	Met	0	Met	0	Met	0.2
		0.2	Phe	-0.2	Phe	0.2	**Tyr**	**0.2**	**Tyr**	**0.2**	Phe	0.2	Phe	0.2	Phe	0.2	Phe	0.2
		0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2	Pro	0.2
		0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2	Ser	0.2
		0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2	Cys	0.2
		0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64	Cys	0.64

Posisi Asam Amino	Referensi Genotipe C		SCB 128		SMB 305		SMB 416		SCB 416		SMB 2896		SCB 2896		SCB 2890		SMB 2223	
			(F179V, V180D)		(P127T)		(I126T, M133I, F134Y)		(I126T, M133I, F134Y)		(S143T, V177M)		(P127T, V177M, F179D)		(S143T, G145E, R160K)		(V177M)	
139	Cys	0.98	Cys	0.98	Cys	0.98	Cys	0.98	Cys	0.98	Cys	1.18	Cys	0.98	Cys	1.18	Cys	1.18
140	Thr	1.47	Thr	1.47	Thr	1.47	Thr	1.47	Thr	1.47	Thr	1.67	Thr	1.47	Thr	1.67	Thr	1.67
141	Lys	2.86	Lys	2.46	Lys	2.86	Lys	2.86	Lys	2.86	Lys	2.76	Lys	2.86	Lys	2.56	Lys	2.76
142	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4	Pro	3.4
143	Ser	3.06	Ser	3.06	Ser	3.06	Ser	3.06	Ser	3.06	**Thr**	**2.86**	Ser	3.06	**Thr**	**2.86**	Thr	2.86
144	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.57	Asp	2.72	Asp	2.57
145	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	Gly	1.93	**Glu**	**2.38**	Gly	1.93
146	Asn	1.19	Asn	1.19	Asn	1.19	Asn	1.19	Asn	1.19	Asn	1.59	Asn	1.19	Asn	1.59	Asn	1.59
147	Cys	0.1	Cys	-0.3	Cys	0.1	Cys	0.1	Cys	0.1	Cys	0.5	Cys	0.1	Cys	1.1	Cys	0.5
148	Thr	-0.6	Thr	-0.6	Thr	-0.6	Thr	-0.6	Thr	-0.6	Thr	-0.2	Thr	-0.6	Thr	0.1	Thr	-0.2
149	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6	Cys	-0.6
150	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.6	Ile	-0.53	Ile	-0.6
151	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.6	Pro	-0.26	Pro	-0.6
152	Ile	-0.25	Ile	-0.45	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.25	Ile	-0.04	Ile	-0.25
153	Pro	0.15	Pro	-0.05	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.15	Pro	0.43	Pro	0.15
154	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.7	Ser	0.35
155	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.35	Ser	0.63	Ser	0.35
156	Trp	0	Trp	-0.2	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0	Trp	0.21	Trp	0
157	Ala	-0.4	Ala	-0.6	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.26	Ala	-0.4
158	Phe	-0.4	Phe	-0.6	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.33	Phe	-0.4
		-0.4	Ala	-0.6	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4	Ala	-0.4
		-0.4	Arg	-0.6	Arg	-0.4	Arg	-0.4	Arg	-0.4	Arg	-0.4	Arg	-0.4	**Lys**	**-0.4**	Lys	-0.4
		-0.4	Phe	-0.6	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Phe	-0.4	Tyr	-0.25
		-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.25
		-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4	Trp	-0.4

Posisi Asam Amino	Referensi Genotipe C		SCB 128		SMB 305		SMB 416		SCB 416		SMB 2896		SCB 2896		SCB 2890		SMB 2223	
			(F179V, V180D)		(P127T)		(I126T, M133I, F134Y)		(I126T, M133I, F134Y)		(S143T, V177M)		(P127T, V177M, F179D)		(S143T, G145E, R160K)		(V177M)	
164	Glu	-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.4	Glu	-0.6	Glu	-0.2
165	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2
166	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1	Ala	-0.1
167	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1	Ser	-0.1
168	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4	Val	-0.4
169	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2	Arg	-0.2
170	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2	Phe	-0.2
171	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2	Ser	-0.2
172	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2	Trp	-0.2
173	Leu	-0.4	Leu	-0.6	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
174	Ser	-0.4	Ser	-0.6	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4	Ser	-0.4
175	Leu	-0.4	Leu	-0.6	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
176	Leu	-0.4	Leu	-0.6	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4	Leu	-0.4
177	Val	-0.4	Val	-0.6	Val	-0.4	Val	-0.4	Val	-0.4	**Met**	**-0.4**	**Met**	**-0.1**	Val	-0.4	**Met**	**-0.4**
178	Pro	-0.4	Pro	-0.6	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.4	Pro	-0.1	Pro	-0.4	Pro	-0.4
179	Phe	-0.6	**Val**	**-0.3**	-	-	**Val**	**-0.2**	-	-	-	-	**Asp**	**0.25**	-	-	-	-
180	Val	-0.6	**Asp**	**-0.3**	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Asam amino dan indeks antigenisitasnya ditandai dengan **huruf tebal,** substitusi asam amino dan indeks antigenisitasnya diberi tanda kuning

CURRICULUM VITAE

A. Data Pribadi

Nama	: Dhita Prabasari Wibowo
Tempat, tanggal lahir	: Jakarta, 29 Maret 1995
Alamat	: Apartemen Sayana, Harapan Indah, Bekasi
Kewarganegaraan	: Warga Negara Indonesia

B. Riwayat Pendidikan

2012 – 2016	: S1 Fakultas Biologi Universitas Gadjah Mada
2009 – 2012	: SMA Negeri 2 Bekasi
2006 – 2009	: SMP Negeri 5 Bekasi
2000 – 2006	: SD Negeri Setia Asih 02

C. Pekerjaan dan Riwayat Pekerjaan

2023 – 2024	: *Laboratory Staff for* BGSI, UNDP
2017 – 2023	: *Research Assistant* Lembaga Biologi Molekuler Eijkman

D. Karya ilmiah yang telah dipublikasikan

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E. Makalah pada Seminar/Konferensi Ilmiah Nasional dan Internasional

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