

In-vivo Validation of Novel Synthetic *tbp1* Peptide-Based Vaccine Candidates against *Haemophilus influenzae* Strains in BALB/c Mice

Supplementary Data

Supplementary Table S1. Summary of Physical and Chemical Analysis Results (Bibi et al., 2021) [35]

	Pal omp6	Gdh	Tbp1	PilW typeIV	Porin OmpA
Gene Size (bp)	462	1350	2739	540	1062
Protein size (aa)	153	449	912	179	353
M. W (kDa)	16	48	103	20	37
pI Value	6.09	6.20	9.34	8.36	9.62
VaxiJen score	0.1642	0.5364	0.5989	0.6058	0.6150
Allergen non-allergen	Allergen	Non-Allergen	Non-Allergen	Non-Allergen	Non-Allergen
Helices <2	zero	zero	zero	zero	zero
Estimated half-life	30hrs	30hrs	30hrs	30hrs	30hrs
Instability index	24.62	23.55	38.14	46.99	20.48
Aliphatic index	79.87	82.38	71.24	82.40	82.75
Non-Homologous	yes	yes	yes	yes	yes

Supplementary Table S2. Nine selected epitopes based on the best scores values (Bibi et al., 2021) [35]

Protein	Epitope	B-Cell Epitopes	T cell epitope	Binding energy score kcal/mol	VaxiJen score	Ic50< 100nm
Pal OMP P6	P E1	AACSSSNNDAAAGNGAAQTFG	CSSSNNDAA	-5.4	1.4973	31
Gdh	G E1	ADVLFPGKAAANAGGVATSG	VLFGPGKAA	-6.2	0.9723	38
	G E2	TTLPMGGAKGGSDFDPKGKS	TTLPMGGAK	-5.1	1.0268	38
	G E3	HVGADTDVPAGDIGVGGREV	DTDVPAGDI	-6.4	1.3879	39
	T E1	CTNGYESCKKSPKPPAKLST	CTNGYESCK	-7.2	0.9685	40
Tbp1	T E2	SNPYLYPKPEPYFAGGDLN	YLYPKPEPY	-7.8	0.4609	40
	T E3	LSKNGTGKGNYGYNHNAQNAK	GTGKGNYG	-6.8	1.3176	35
PilW	PW E1	EQAQQQFELALNSPNYYHQA	AQQQFELAL	-5.4	0.7423	41
Porin	PorinE1	DAISATGYGKANPVTGATCD	KANVTGAT	-5.8	0.9864	41

Reference:

Bibi, N., Zaidi, N. S., Tahir, M., & Babar, M. M. (2021). Vaccinomics-driven proteome-wide screening of *Haemophilus influenzae* for the prediction of common putative vaccine candidates. *Can J Microbiol*, 67(11), 799-812. <https://doi.org/10.1139/cjm-2020-0535>