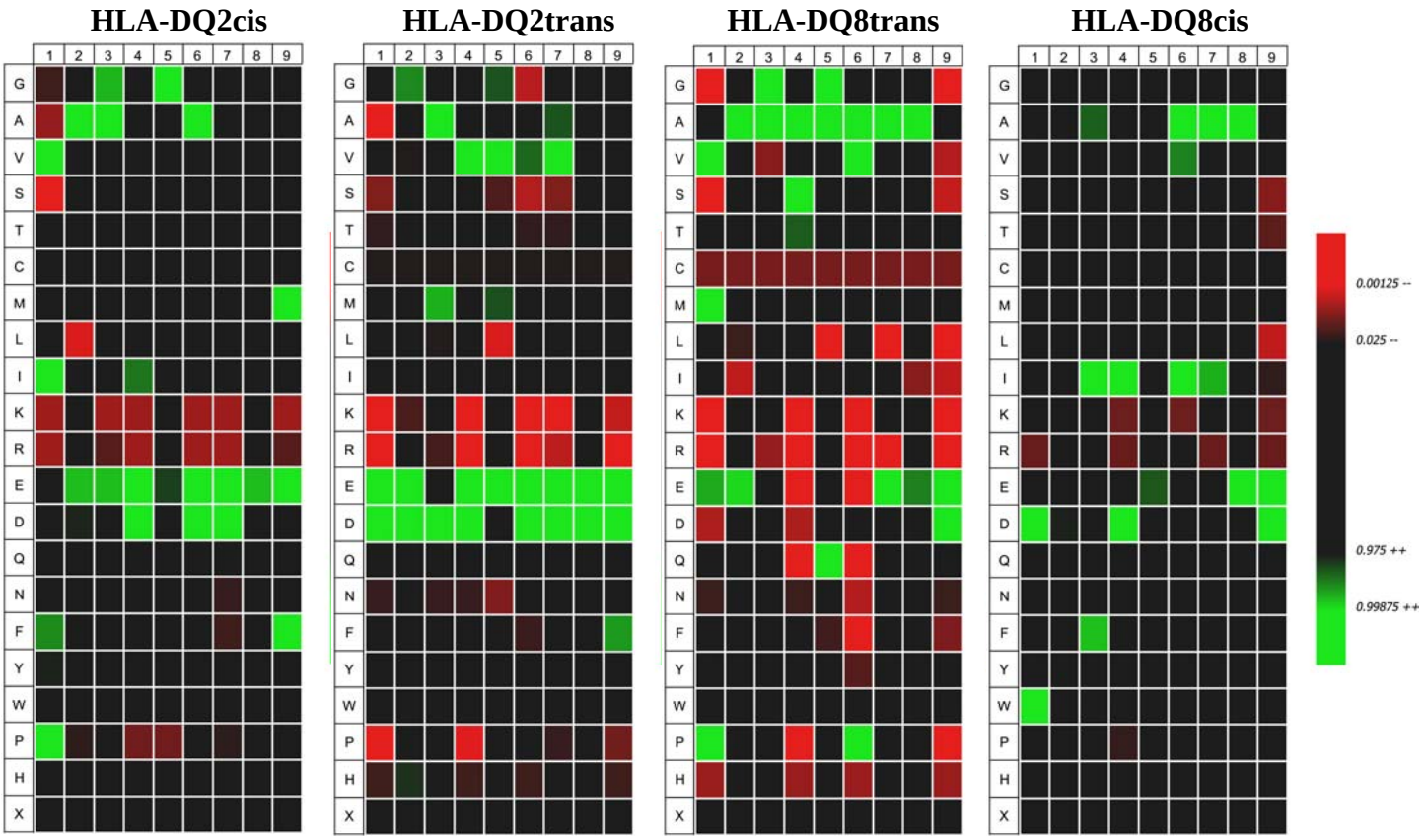
Supplemental data Trans paper Van Lummel *et al*.

SUPPLEMENTAL FIGURE 1. Frequency of the amino acids at anchor and non-anchor positions within the binding core of HLA-DQ2trans and HLA-DQ8trans – After performing core analysis of the eluted peptides, the distribution of amino acids at both anchor (p1, p4, p6, p7, p9) and non-anchor positions (p2, p3, p5, p8) for DQ2trans and DQ8trans was calculated and compared to the amino acid frequency of the human proteome (see *Supplementary Figure 1*). The figure shows the heatmap results of an iceLogo analysis four each HLA-DQ molecule. Increased or decreased amino acid frequencies are shown in a gradient of respectively green or red shades.



SUPPLEMENTAL TABLE 1. Unique HLA-DQ2trans and HLA-DQ8trans eluted peptides and their predicted 9 amino acid core with anchor residues. Peptides eluted from HLA-DQ2trans or HLA-DQ8trans. After peptide elution, MS/MS analysis and identification unique peptides derived from different proteins were selected and predictions for their anchor residues were conducted based on molecular simulation studies. Anchor residues p1, p4, p6, p7 and p9 are shown in bold.

HLA-DQ2trans		
IP**E**HD**E**A**DE**I**S**DEN	ED**E**EK**D**E**ED**E**E**DEDK	IFEI**E**RG**V**S**AD**D**E**A
DE**D**EE**E**G**EE**V**V**EDR	K**E**GE**E**A**DA**P**G**VIPG	GVL**D**EQ**E**L**EA**L**F**TKE
KVD**E**NM**VI**D**E**T**L**DVK	KPSAGD**D**FD**L**G**DA**V**V**DG	D**T**GE**G**W**ET**V**E**MHPA
VG**E**QD**GG**L**I**G**A**EEKVIN	GL**D**LA**D**A**LD**D**Q**DDGR	DTNQ**D**RL**V**T**LE**E**F**LA
DLQP**W**HS**F**G**AD**S**V**PAN	PPGSGL**D**LA**D**A**LD**D**Q**DDG	FHP**D**TD**D**V**PV**P**A**PAG
DGS**E**DK**V**V**EV**A**E**EEEVA	SVK**E**SA**E**V**EE**I**V**FPR	N**E**ED**D**M**VE**M**E**EER
GS**E**DK**V**V**EV**A**E**EEE	EAC**S**PS**S**G**EG**A**S**EGKQER	DSLQD**I**GM**D**H**Q**A**L**LKQ
MPSLT**E**TK**T**T**VE**L**L**PVN	GI**L**NP**S**QP**G**QS**S**SSSQT	DVNSDG**F**LD**E**Q**EL**EA**L**
VPANT**E**NE**V**E**PV**DA**R**PA	AGP**E**AA**L**E**AE**E**W**VSG	EP**D**SW**E**T**LD**Q**Q**QF
GPTG**E**PQ**Q**E**DD**E**F**LMATD	GP**M**DA**S**V**EE**E**G**VRR	LD**Q**QQ**F**F**TE**E**L**KE
NPV**E**DS**Q**V**IV**E**E**VSI	SED**M**DH**G**V**L**V**G**YGFE	LEP**D**SW**E**T**LD**Q**Q**Q
PVEDSQ**V**IV**E**E**VS**I**F**P	EIH**D**AA**D**T**IE**T**D**TAT	ANE**V**EA**V**K**VH**S**F**PT
EPHTEP**E**EQ**V**PV**E**A**E**PQN	AV**G**GL**G**K**L**G**K**DA	LEDL**E**EA**E**E**PD**M**E**EDDD
VYE**E**QA**V**Y**EP**L**E**NEG	GA**V**HD**V**K**DV**L**D**S	MEE**D**DD**Q**K**AV**K**D**EL
VSN**D**KA**L**M**VL**T**E**EPL	S**S**LL**E**K**GL**D**G**AK	AA**D**HD**V**G**SE**L**P**PEGVL
GAD**D**AA**D**A**DT**A**I**IN	VNE**E**RT**L**E**VE**I**E**PGVR	GPDE**D**SS**N**R**EN**A**I**EDE
D**E**EV**D**E**MI**R**E**ADIDGD	ADG**Y**SA**D**L**PL**P**L**PIR	DI**D**LS**D**V**EL**D**D**LGK
ED**E**EK**D**E**ED**E**E**DEDK	N**V**IE**G**P**VF**R**P**GSKT	E**D**DI**D**L**SD**V**E**LDDLG
K**E**GE**E**A**DA**P**G**VIPG	VVT**G**NM**G**S**ND**K**V**GDF	GRDG**E**LP**V**E**DD**I**D**LSD
KPSAGD**D**FD**L**G**DA**V**V**DG	KVL**E**GM**V**E**EN**Q**V**NVE	LPVE**D**DI**D**L**SD**V**E**LDDLG
GL**D**LA**D**A**LD**D**Q**DDGR	GD**L**DV**G**G**LQ**E**T**DKIIE	EEG**E**AG**D**E**EL**P**L**PPG
KPPGSGL**D**LA**D**A**LD**D**Q**DDG	DKIIE**V**EE**E**Q**ED**P**Y**	V**E**KQ**E**E**EE**E**E**ELLPV
SVK**E**SA**E**V**EE**I**V**FPR	LQE**T**DK**II**E**V**EE**E**QEDPY	AQQ**E**QE**L**A**AD**A**F**KEL
EAC**S**PS**S**G**EG**A**S**EGKQER	LS**L**DT**E**V**DE**E**N**ALSPE	D**E**AI**E**T**DD**L**T**IK
GI**L**NP**S**Q**P**G**Q**SSSSQT	VPWPHV**E**GV**E**V**DL**E**S**IR	RP**D**S**EL**G**E**RPPEDNQS
AGP**E**AA**L**E**AE**E**W**VSG	E**F**EE**A**E**Q**V**RE**ENLPDE	DG**D**GF**V**T**TE**E**L**K
GP**M**DA**S**V**EE**E**G**VRR	DPESE**A**DR**A**A**VE**D**I**NPA	NQS**F**QY**D**H**EA**F**L**GKE
SED**M**DH**G**V**L**V**G**YGFE	GPERD**Q**LV**I**P**DG**Q**E**E	ERPPEDNQS**F**QY**D**H**EA**F**L**GKE
EIH**D**AA**D**T**IE**T**D**TAT	VSQ**E**NP**E**M**EG**P**E**RDQ	FV**D**QD**E**Y**IA**D**M**FSHE
AV**G**GL**G**K**L**G**K**DA	DWAQ**E**QG**D**A**PA**I**L**FDK	YIA**D**MF**S**H**EE**N**G**PEPD
GA**V**HD**V**K**DV**L**D**S	FD**E**DE**M**F**YV**D**L**DKKET	SDYDREA**L**LG**V**Q**ED**V**D**EYVK
S**S**LL**E**K**GL**D**G**AK	ED**I**VA**D**H**VA**S**Y**GVNL	RQ**L**HD**D**Y**FY**H**D**EL
VNE**E**RT**L**E**VE**I**E**PGVR	YGV**N**LY**Q**S**YG**P**S**GQYSHEFD	IAQ**E**EA**L**H**LI**D**E**MD
ADG**Y**SA**D**L**PL**P**L**PIR	**F**DG**D**E**EF**Y**V**DLER	D**I**NT**D**GA**V**N**F**QEF
N**V**IE**G**P**VF**R**P**GSKT	D**V**GE**F**R**AV**T**L**LGLPA	EGPKEG**E**AV**V**L**PE**V**E**PGLT
VVT**G**NM**G**S**ND**K**V**GDF	TA**V**DT**A**A**QI**S**E**QKSN	DD**L**ED**S**M**IG**P**E**VVHPL
KVL**E**GM**V**E**EN**Q**V**NVE	GS**G**SG**W**S**SS**R**G**PY	DSNH**D**GI**V**T**AE**E**L**ESY
GD**L**DV**GG**L**Q**E**T**DKIIE	DEEM**D**VG**T**D**EE**E**E**TAK	SEL**E**SS**I**Q**EE**E**D**SLK
KIIE**V**EE**E**Q**ED**P**Y**	D**E**AA**V**E**EE**E**E**EKKP	EE**L**DA**E**V**LE**V**F**HPT
LQE**T**DK**II**E**V**EE**E**QEDPY	IDP**D**AK**V**E**EE**P**E**EEPE	LNL**Q**TG**E**R**EA**K**L**QYE
LS**L**DT**E**V**DE**E**N**ALSPE	VD**V**DG**T**V**EE**D**L**GKS	SQL**E**EA**G**R**AE**M**L**DHA
VPWPHV**E**GV**E**V**DL**E**S**IR	V**Q**RE**E**E**AI**Q**L**DGLN	VSRD**L**GL**A**A**DL**P**G**GA
E**F**EE**A**E**Q**V**RE**ENLPDE	TPA**N**ED**Q**K**IG**I**E**EIIK	VVVDE**G**QD**R**E**VP**E**E**NKPP
IP**E**HD**E**A**DE**I**S**DEN	AEAGP**E**GV**A**P**AP**E**G**EK	A**L**PD**E**T**EV**V**E**ETVAE
DE**D**EE**E**G**EE**V**V**EDR	AP**V**E**DG**S**Q**PPPPEPKG	EVT**E**VS**V**G**AN**P**V**QVE
KVD**E**NM**VI**D**E**T**L**DVK	DEPGE**Q**VE**L**K**EE**A**E**APV	EIDK**E**GV**I**E**PD**T**D**APQ
VG**E**QD**GG**L**I**G**A**EEKVIN	VELK**E**EA**E**A**PV**E**D**GSQPPPP	ELME**D**SR**T**E**AD**E**D**RGQG
DLQP**W**HS**F**G**AD**S**V**PAN	L**V**ED**S**A**EE**E**S**TLTK	V**L**EE**D**S**AD**W**E**KELQQ
DGS**E**DK**V**V**EV**A**E**EEEVA	TGS**E**PG**D**T**EP**L**E**LGGPG	FPG**D**MD**E**G**DA**S**L**FTRPE

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NPVEDSQVIVEEVSI	SPEEMDLSQEQPLDAQQ	AAGEALVGAAGFPPH
PVEDSQVIVEEVSIFP	APGDPEAALEDNLARI	TAFDEAIAELDTLN
EPHTEPEEQVPVEAEPQN	DGYIDYAEFAKSLQ	NLFASFIAPTILGLP
VYEEQAVYEPLENEG	TVHDQEHIMEHLE	DEEVDEMIREADIDG
VSNDKALMVLTEEPL	VHKEEGSEQAPLMSED	IDELLIWHGMTAAQTL
HLA-DQ8trans		
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SPPALELARGSVAPAPG	LTKLGNTISSLFGGG	GEQPKPASPAEEDKMP
VEAAPETTAVSAETGPE	AGGAAAAAAAPEPPPR	LALARSLPPAEELPV
SWTTRSQLANTEPT	KPSQVYFGGTVVGEQAM	VGSEPQAFDVFPENPR
APFRSALESSPDPAT	GKLQSLDLSAAAEMTCG	VPAKVASKNVIPA
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DARFYALSASFEPFS	IGTLNAAKVPADTE	GHVSYSAVSRENSS
FDYDHDAFLGAEEAK	WNIVSFPVAEELSH	SITPASATASSEPAPA
ATDFGEALVRHDEF	AEQVVQGMKEAQERL	TYGYYLGNPAEFHDS
SFETQKTNLATENQY	NPSYKYFYVSAEQVV	DYDREALLGVQEDVDEY
LPPDVPNAQPALEGRT	AAEEANAVLGLDTQ	EDPEWILVEKDRFVN
DDFDLGDAVVDGENDDPR	LARADAAKALAEEAA	VEVGGGAAGERELD
PNPNHPSSSGSFSDADL	LENEANNIKMEAENLE	VPVSNEISNSASSHEEDN
DNPPEFTAMTFYGEVPE	ADQDMMMAGMASQAAQE	SPPSASPAESEPQCDP

DMEALRSTLQTMESD	TGNLAEQARAHVENTE	LPALFGATLSQEGLQ
SQAKYGISGEKDVSPD	ADELALVDVLEDK	QEGLQGFLVEAHPDN
FRINPDGSQSVVEVPY	GMQHPGSAGGVYETTQ	ALIKAAGVNVEPFWP
TIQMGSFRINPDGSQ	AMLSTPVAEG	GPAPSTAAAPAEEKK
WPSDDIEEAGIVAREFG	AVTPLGPPAAEYW	AAPAAGSAPAAAEEK
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ESAAMAASANIENSG	IISNIRDSVINLSES	KPVVAPTLSVVQTEGSR
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ISQRIVSAQSLAEDDVE	APEAGASPVEKEAPA	AEVLEVFHPTHEWQA
GFLVGGASLKPEFVD	AKGAEASAASEEE	ALQPGQAVPAGSHV
AGAQAAAVALNEEFL	EPQAKGAEASAASEE	DAEVLEVFHPTHEWQA
APPEDKVVPSFLPVDQG	EEPAASFSQPGSM	DRPGQGIAVPVGEAHR
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RVPAAGAVAAAEVTV	IMEHLEGVINKPEAEM	FPQTTEKISPNWESGIN
GGGKVAPAQPSEEGPG	TPEGEFVSMGVISDGNS	DTDVEEGSEVEDERPA
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LTDHGAASPQLEPEPQ	LELYNSAATDSEKA	EVSVGANPVQVEVGE
QEVAETSLQLPQDEVSA	GGAMEEMQPLHEDN	SEGPSSLDPSQEGPT
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APGPLAQSVDSNKEE	QVDPGAAAAAAAAA	TQVMAASMSAFDPLK
SGHGSVAEREAGGE	APEPAASPAGPEEPG	IPSIQLFPGLREPEE
VPRELSGSSPVLEETHPA	GPGDPAAAPAEAEEQA	SPPQEEVKSSEPTEDVEPK
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DPAEGDGAQPEETPR	AASVAAGGAEELRS	LPSRDSSGTAVAPEN
SYDNYEGSAPNLFVWN	AEQLRQTALQQEAR	ADAEDLSGSIASPDVK
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VDIVAINDPFID	GWETVEMHPAYTEEEL	DMLIKAATSDLEHYD