

AIM

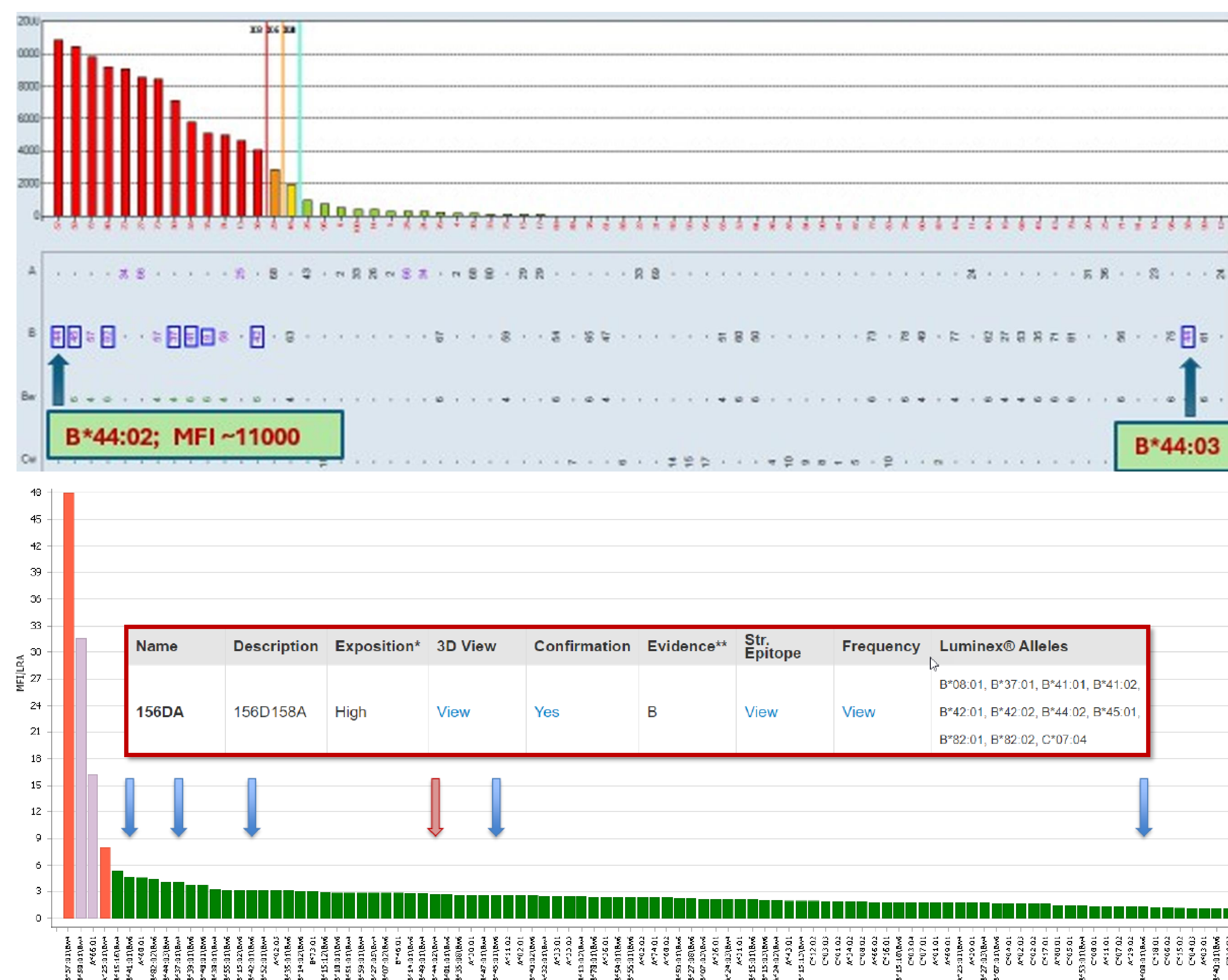
This study presents a case of persistent single-antigen bead (SAB) reactivity to eplet 156DA in a sensitized patient identified by an allele specific HLA-B*44:02 antibody.

CASE DESCRIPTION

A 57-yo African American female was listed for kidney transplant for ESRD caused by DM/HTN. Her sensitization history includes four pregnancies. She typed as B*44:03 and B*51.

Patient HLA Typing		
A*	03	24
B*	44(44:03)	51
Bw	4	4
C*	09	15
DRB1*	04	08
DRB345	4*01(DR53)	-
DQB1*	03(DQ8)	03(DQ7)
DQA1*	03	05
DPB1*	02:01	03:01
DPA1*	01	01

Her SAB antibody profile shows a consistent, strong reactivity to B*44:02 with Class I PRA ranging between 10-15%. Other antibody reactivities include A25, A*34:01, A*66:01, A*68:01 and B8, B37, B41, B42, B45, B57, B58, B63 and B82.



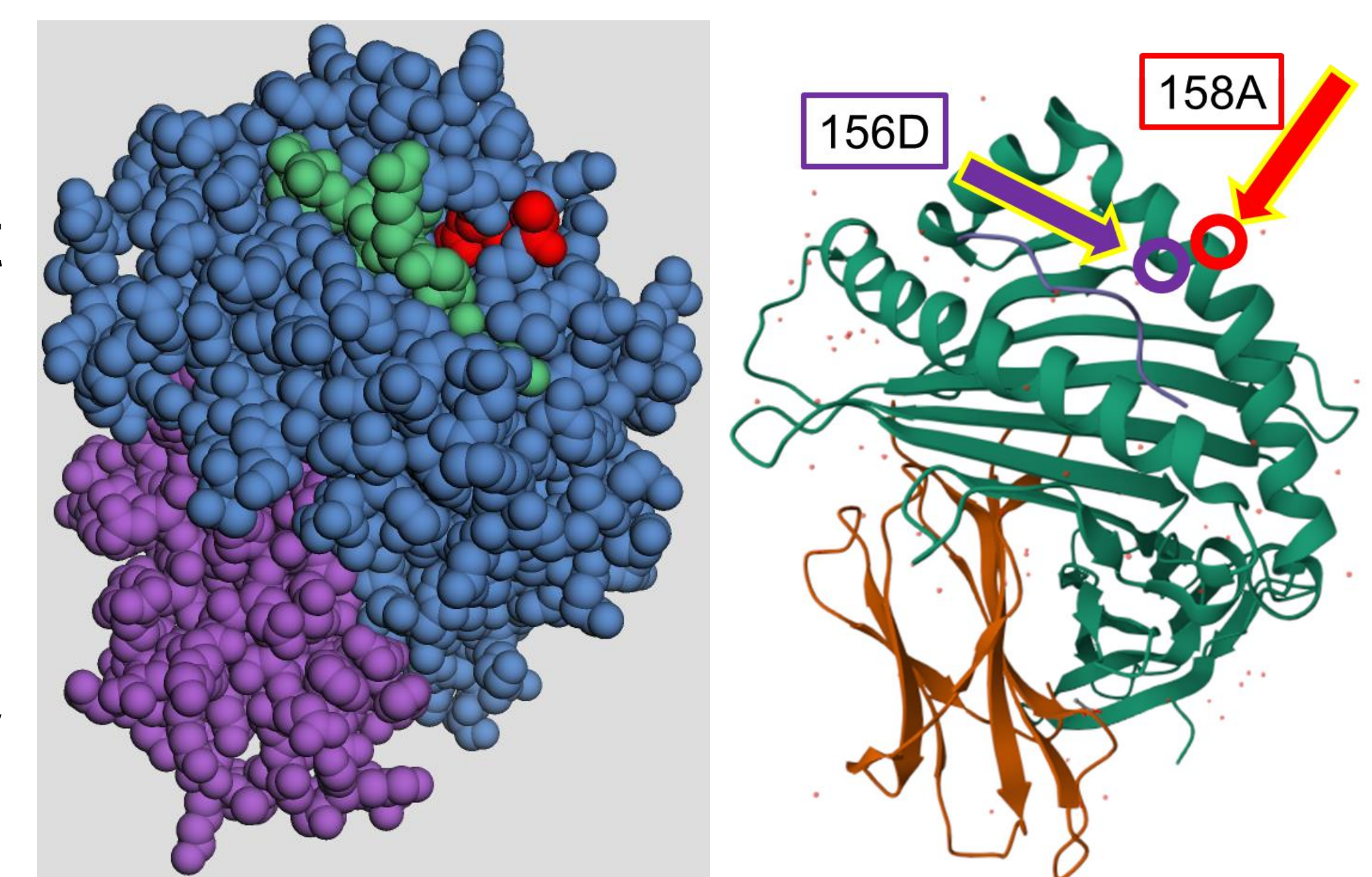
RESULTS

According to the HLA Eplet Registry, the patient's antibody profile aligns with reactivity to eplet 156DA present on B*44:02 but not on B*44:03. To confirm the antibody to 156DA, 3 surrogate crossmatches were run against different 156DA+ cells and additional SAB testing was performed using another vendor's assay.

ID	Name	Description	Evidence**	Exposition*	Status	Str. eplet	Frequency	3D View (Luminex® Alleles)
172	156DA	156D158A	B	High	Confirmed	View	View	B*08:01, B*37:01, B*41:01, B*41:02, B*42:01, B*42:02, B*44:02, B*45:01, B*82:01, B*82:02, C*07:04

Surrogate Donor	A	B	C	T Cell MCS	T Cell Result	B Cell MCS	B Cell Result
ALGO047	1 2	8 62	7 10	-8	Neg	-32	Neg
ALHM248	1 24	18 44:02	7 5	-14	Neg	-28	Neg
ALHH056	1 24	35 44:02	6 5	-3	Neg	-28	Neg

Eplet 156DA comprises aspartic acid (D) at position 156 and alanine (A) at position 158 and is located on one of the α -helices forming the peptide-binding groove. Structural modeling shows that 158A is fully surface-exposed, whereas 156D is partially buried.



CONCLUSION

Antibody to 156DA as detected by LabScreen SAB is likely due to denatured antigens or targets HLA antigens on beads without peptides. The mechanism for patient sensitization to eplet 156DA (4x pregnancies) is unknown. Unacceptable antigen assignment based on Werfen SAB = B57, B58, A25, A*66:01 (CPRA = 15%). Antibody to 156DA may not be clinically relevant. Discrepant assay results, as in this case, underscore the need for orthogonal confirmatory testing before unnecessarily excluding donors for highly sensitized candidates even in cases where the reactivity can be attributed to an identified eplet.