MHC Class 1 Molecules

- Present linear foreign peptides which are most commonly 9 or 10 amino acids long
- Anchor sites (2 and 9) are usually important for binding and recognition
- Mutations which alter the peptide can hinder or prevent
 CTL response activation

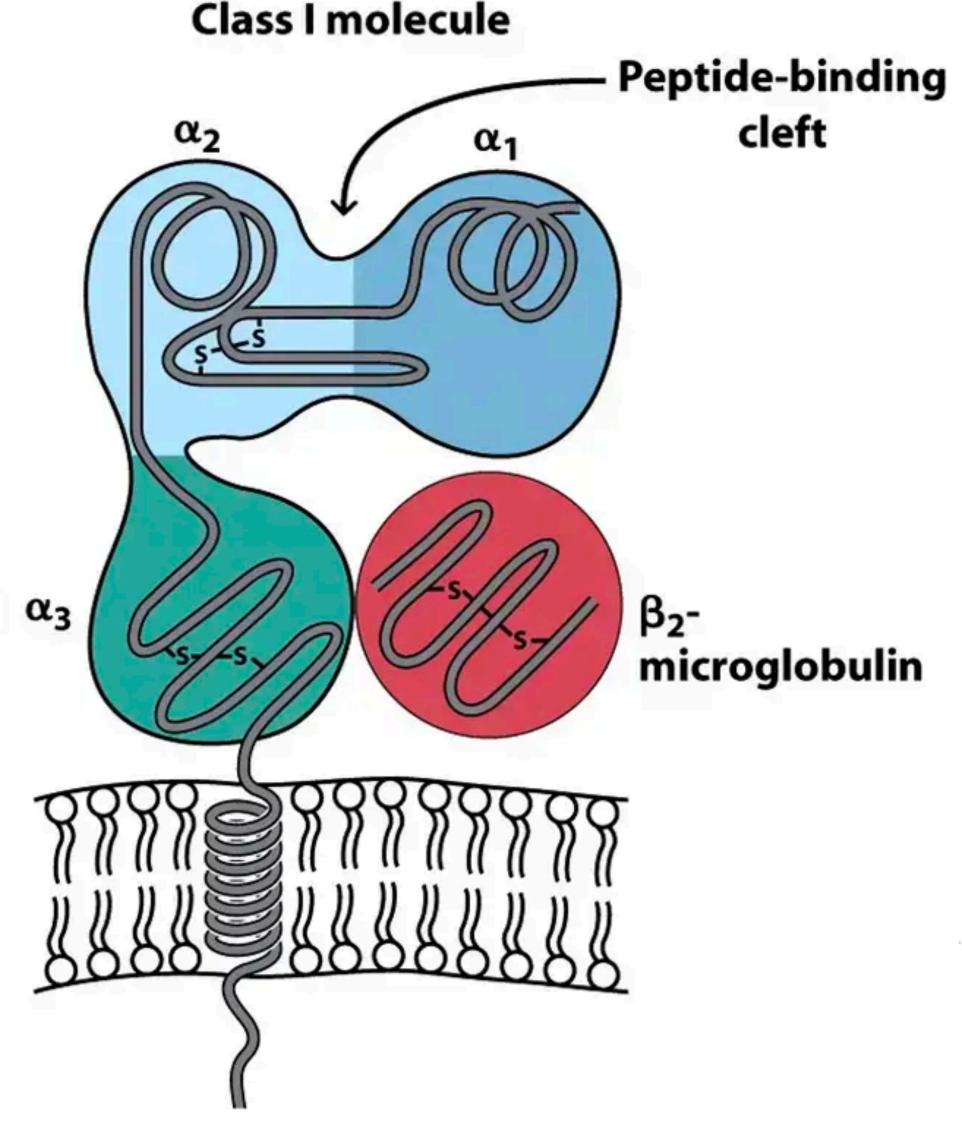
Membrane-distal domains

Membrane-proximal α₃
domains
(Ig-fold structure)

Transmembrane segment

Cytoplasmic tail

Figure 8-3
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Rapid SIV sequence evolution in macaques in response to CTL-driven selection

- SIV: the only animal model of HIV (rhesus macaques)
- Experimental infection with MHC-matched strain of SIV
- Virus sequenced from a sample 2 weeks post infection
- Only variation was in an epitope recognized by the MHC CTL escape

	90	80	70	60	50	40	30	20	10	b
								SSNERSSCISEAD		
										96114
(3/10)						 E	L . P			96118
(1/10)										
						E	L . P			96118