

## HIV Helper-T Cell Epitopes

Table 11: Rev

HXB2 Location	Author Location	Sequence	Immunogen	Species(HLA)	References
Rev(9–23)	Rev(9–23 HXB2)	DEELIRTVRLIKLLY	HIV-1 infection	human( )	[Blazevic (1995)]
	• One of four peptides that stimulates in PBLs from HIV-1+ donors, both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide were stimulated				
Rev(16–35)	Rev(16–35 LAI)	VRLJKFLYQSNNPPNPEGTR	Nef, Rev and Tat DNA immunization	murine(H-2 <sup>d</sup> )	[Hinkula (1997)]
	• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein				
	• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev				
Rev(25–39)	Rev(25–39 HXB2)	SNPPPNEGTQRQARR	HIV-1 infection	human( )	[Blazevic (1995)]
	• One of four peptides that stimulates in PBLs from HIV-1+ donors both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide were stimulated				
Rev(31–50)	Rev(31–50 LAI)	PEGTRQARRNRNRWRQR	Nef, Rev and Tat DNA immunization	murine(H-2 <sup>d</sup> )	[Hinkula (1997)]
	• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein				
	• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev				
Rev(33–48)	Rev(33–48 HXB2)	GTRQARRNRNRWRER	HIV-1 infection	human( )	[Blazevic (1995)]
	• One of four peptides that stimulates in PBLs from HIV-1+ donors both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide were stimulated				
Rev(41–56)	Rev(41–56 HXB2)	RRRRWWRERQRQIHSIS	HIV-1 infection	human( )	[Blazevic (1995)]
	• One of four peptides that stimulates in PBLs from HIV-1+ donors both CD4+ Th cell proliferation and CTL to autologous targets incubated with peptide were stimulated				
Rev(76–95)	Rev(76–95 LAI)	PPLERLTLDNCNEDCGTSGTQ	Nef, Rev and Tat DNA immunization	murine(H-2 <sup>b</sup> )	[Hinkula (1997)]
	• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein				
	• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev				

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HXB2 Location	Author Location	Sequence	Immunogen	Species(HLA)	References
Rev(96–116)	Rev(96–116 LAI)	GVGSPQLVESPTVLESGTKE	Nef, Rev and Tat DNA immunization	murine(H-2 <sup>d</sup> )	[Hinkula (1997)]
		<ul style="list-style-type: none"> <li>• Stronger, broader responses were observed in animals vaccinated with DNA epidermally rather than with intramuscular protein</li> <li>• Some proliferative response to vaccination was observed to peptides throughout Nef and Tat, less for Rev</li> </ul>			
Rev( )	Rev()	Rev M10	murine( )	[Chan (1998)]	
		<ul style="list-style-type: none"> <li>• Rev M10 is a construct that was introduced into mice through a genetic vaccination</li> <li>• Rev was used to test for down-regulation of HIV-1 in infected cells as a method for gene therapy – in the course of this study, Rev-specific IL-2 producing Th cells developed in the mice</li> </ul>			
Rev( )	Rev()	DNA constructs encoding HIV-1 genes nef, rev or tat	human( )	[Calarota (1999)]	
		<ul style="list-style-type: none"> <li>• 9/9 HIV-1+ subjects were given one of three DNA vaccinations for nef, rev or tat, and novel proliferative and CTL responses were generated</li> <li>• The nef DNA immunization induced the highest and most consistent CTLp activity, IFN-<math>\gamma</math> production, and IL-6 and IgG responses</li> <li>• Highly active antiretroviral treatment (HAART) did not induce new HIV-specific CTL responses but reduced viral load, while DNA vaccination induced new immune responses but did not reduce viral load – thus this is a potentially complementary and promising combination</li> </ul>			

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