

Table 11: **Rev**

| MAb ID  | HXB2 Location | Author's Location | Sequence               | Neutralizing | Immunogen                           | Species(Isotype)                    |
|---|---------------|-------------------|------------------------|--------------|-------------------------------------|-------------------------------------|
| 219 4G9   | Rev(5–15)     | Rev(5–15)         | SGDSDEELIRT?           |              | <i>E. coli</i> expressed<br>rec Rev | murine( )                           |
| <p><b>References:</b> [Jensen (1997)]</p> <ul style="list-style-type: none"> <li>• 4G9: Mapped binding location by protein footprinting –Jensen97</li> </ul>  |               |                   |                        |              |                                     |                                     |
| 220 Ab2   | Rev(32–50)    | Rev(32–49 BRU)    | EGTRQARRNRRRWRE-<br>QR |              | rec Rev                             | (IgG <sub>1</sub> )                 |
| <p><b>Donor:</b> Tony Lowe and Jonathan Karn, MRC Center, Cambridge</p> <p><b>References:</b> [Henderson &amp; Percipalle(1997)]</p> <ul style="list-style-type: none"> <li>• Ab2: The Ab2 binding site overlaps the nuclear localization signal – Ab2 binding to Rev was blocked by bound HIV RNA – the cellular protein importin-<math>\beta</math> can bind in this Arg rich region – atypically, the Rev binds specifically to importin-<math>\beta</math>, but not to the importin-<math>\beta</math>-importin-<math>\alpha</math> dimer –Henderson97</li> </ul> |               |                   |                        |              |                                     |                                     |
| 221 10.1  | Rev(33–48)    | Rev(33–48)        | GTRQARRNRRRWRE?        |              |                                     | ( )                                 |
| <p><b>References:</b> [Ovod (1992), Ranki (1994), Ranki (1995)]</p> <ul style="list-style-type: none"> <li>• 10.1: Binds to the RRE – polyclonal anti-Rev Ab detected Rev in astrocytes in 4/5 brain autopsy samples, but only one of these was positive using 10.1, suggesting most Rev was bound to RRE –Ranki95</li> </ul>   |               |                   |                        |              |                                     |                                     |
| 222 3H6   | Rev(38–43)    | Rev(38–44)        | RRNRRR                 |              | rec Rev                             | murine(IgG <sub>1</sub> $\kappa$ )  |
| <p><b>References:</b> [Orsini (1995)]</p> <ul style="list-style-type: none"> <li>• 3H6: There is another MAb with this ID that recognizes gp41 –Pinter95b</li> <li>• 3H6: Directed against nucleolar localization/RRE binding domain – antigenic domain tentative, MAb failed to bind a RRNRRR Rev deletion mutant –Orsini95</li> </ul>   |               |                   |                        |              |                                     |                                     |
| 223 9G2   | Rev(70–84)    | Rev(70–84)        | PVPLQLPPLERLTD         |              | <i>E. coli</i> expressed<br>rec Rev | murine(IgG <sub>2a</sub> $\kappa$ ) |
| <p><b>Donor:</b> Anne Marie Szilvay</p> <p><b>References:</b> [Kalland (1994a), Jensen (1997)]</p> <ul style="list-style-type: none"> <li>• 9G2: Worked in indirect immunofluorescence and also detected Rev in WB assays – used to detect localization of Rev throughout the cell –Kalland94</li> <li>• 9G2: Peptide interaction mapped to aa 70-84, 75–88 – protein footprint to 65–88 –Jensen97</li> <li>• 9G2: Called 9G2G4D6E8: UK Medical Research Council AIDS reagent: ARP3058</li> </ul>   |               |                   |                        |              |                                     |                                     |

## HIV Monoclonal Antibodies

| MAB ID   | HXB2 Location | Author's Location | Sequence                         | Neutralizing | Immunogen                           | Species(Isotype)            |
|--|---------------|-------------------|----------------------------------|--------------|-------------------------------------|-----------------------------|
| 224 8E7  | Rev(70–84)    | Rev(70–84)        | PVPLQLPPLERLTLTD                 |              | <i>E. coli</i> expressed<br>rec Rev | murine(IgG <sub>2a</sub> κ) |
| <p><b>References:</b> [Kalland (1994a), Kalland (1994b), Szilvay (1995), Jensen (1997), Boe (1998)]</p> <ul style="list-style-type: none"> <li>• 8E7: 8E7 worked in indirect immunofluorescence and also detected Rev in WB assays – used to detect localization of Rev in several compartments including the nucleoli, nucleoplasm, perinuclear zone, and cytoplasm – Rev co-localized with host cell factors known to assemble on nascent transcripts – Rev shuttles continuously between cytoplasmic and nucleoplasmic compartments. –Kalland94,Kalland94a,Szilvay95</li> <li>• 8E7: Peptide interaction mapped to aa 70–84, 75–88 – protein footprint to 65–88 –Jensen97</li> <li>• 8E7: HIV-1 RNA and Rev localize to the same region in the nucleoplasm, but the splicing factor SC-35 localizes in different speckles with the nucleoplasm than Rev – intron containing β-globin was distributed similarly to HIV-1, suggesting Rev and HIV-1 RNAs interact at putative sites of mRNA transcriptions and splicing –Boe98</li> </ul> |               |                   |                                  |              |                                     |                             |
| 225 Ab4  | Rev(72–91)    | Rev(72–91 BRU)    | PLQLPPLERLTLDCNED-<br>CGT        |              | rec Rev                             | (IgG <sub>1</sub> )         |
| <p><b>Donor:</b> Tony Lowe and Jonathan Karn, MRC Center, Cambridge</p> <p><b>References:</b> [Henderson &amp; Percipalle(1997)]</p> <ul style="list-style-type: none"> <li>• Ab4: The binding site overlaps the nuclear export signal – binding was not blocked by bound HIV RNA and may be accessible for protein interaction –Henderson97</li> </ul>  |               |                   |                                  |              |                                     |                             |
| 226 3G4  | Rev(90–116)   | Rev(90–116)       | TSGTQGVGSPQILVESP-<br>TVLESGTKE? |              | rec Rev                             | murine(IgG <sub>1</sub> κ)  |
| <p><b>References:</b> [Orsini (1995)]</p> <ul style="list-style-type: none"> <li>• 3G4: Binds to a region that can be dispensed with and still retain Rev function –Orsini95</li> </ul>  |               |                   |                                  |              |                                     |                             |
| 227 1G10   | Rev(96–105)   | Rev(95–105)       | GVGSPQILVE                       |              | <i>E. coli</i> expressed<br>rec Rev | murine(IgG <sub>2b</sub> κ) |
| <p><b>Donor:</b> Anne Marie Szilvay</p> <p><b>References:</b> [Kalland (1994a)]</p> <ul style="list-style-type: none"> <li>• 1G10: Bound Rev in indirect immunofluorescence and also detected Rev in WB – used to detect localization of Rev throughout the cell –Kalland94</li> <li>• 1G10: Peptide interaction mapped to aa 91–105, 96–110 – protein footprint to aa 10-20, and 95–105 –Jensen97</li> <li>• 1G10: Called IG10F4: UK Medical Research Council AIDS reagent: ARP3060</li> </ul>  |               |                   |                                  |              |                                     |                             |

HIV Monoclonal Antibodies

| MAb ID   | HXB2 Location | Author's Location | Sequence        | Neutralizing | Immunogen                           | Species(Isotype)            |
|--|---------------|-------------------|-----------------|--------------|-------------------------------------|-----------------------------|
| 228 1G7  | Rev(96–105)   | Rev(95–105)       | GVGSPQILVE      |              | <i>E. coli</i> expressed<br>rec Rev | murine(IgG <sub>2b</sub> κ) |
| <p><b>References:</b> [Kalland (1994a), Jensen (1997)]</p> <ul style="list-style-type: none"> <li>• 1G7: Worked in indirect immunofluorescence and also detected Rev in WB – used to detect localization of Rev throughout the cell –Kalland94</li> <li>• 1G7: Peptide interaction mapped to aa 91–105, 96–110 – protein footprint to aa 95–105 –Jensen97</li> </ul> |               |                   |                 |              |                                     |                             |
| 229 Ab3  | Rev(102–116)  | Rev(102–116 BRU)  | ILVESPTVLESDKTE |              | rec Rev                             | (IgG <sub>1</sub> )         |
| <p><b>Donor:</b> Tony Lowe and Jonathan Karn, MRC, Cambridge</p> <p><b>References:</b> [Henderson &amp; Percipalle(1997)]</p> <ul style="list-style-type: none"> <li>• Ab3: This binding site is at the carboxy end of Rev – Ab3 binding was not blocked by bound HIV RNA –Henderson97</li> </ul>  |               |                   |                 |              |                                     |                             |
| 230 2G2  | Rev(dis)      | Rev(Rev dis)      |                 |              | rec Rev                             | murine(IgG <sub>1</sub> κ)  |
| <p><b>References:</b> [Orsini (1995)]</p> <ul style="list-style-type: none"> <li>• 2G2: Does not bind to any of a set of glutathione S-transferase (GST) Rev fusion proteins, or to Rev in a RIPA buffer, suggesting a conformational epitope –Orsini95</li> </ul>   |               |                   |                 |              |                                     |                             |

B Cell