

Sequence variation of the Rous sarcoma virus PrA *src* gene

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Using the reverse cloning procedure (Liu and Hackett, BioTechniques submitted), we have sequenced the *src* gene of the PrA strain of Rous sarcoma virus (RSV). The PrA *src* gene we sequenced was obtained from Dr. M. Stoltzfus (U. Iowa) and originally isolated by Dr. J.T. Parsons (U. Virginia). As shown in the table below, the PrA *src* gene differs from that of the PrC and SR-A *src* genes by 6 and 19 amino aa respectively. Our PrA *src* sequence varies from that previously reported (1). We find the same variations from the PrC *src* sequence at bases 7082, 7742, 7852, 7855 and 8706. However, we find unreported differences between the PrA and PrC *src* genes at positions 7059, 7175 (but not 7185), 7338 (but not 7332), 7666, 7749 (should be 7779), and 7791. These results, plus the additional sequences reported by Fincham and Wyke (1), indicate the variable nature of interstrain and intrastrain *src* sequences. The consequences of these differences in *src* activity are not known.

Strain Variations in the RSV <i>src</i> Genes															
site	PrC		SR-A		PrA		Δ	site	PrC		SR-A		PrA		Δ
	nt	aa	nt	aa	nt	aa			nt	aa	nt	aa	nt	aa	
7059	A	x	G	x	G	x	A/x	7742	A	Tyr	G	Arg	G	Cys	nc
7122	G	x	C	x	-	x	nc	7750	U	Tyr	G	Asp	-	-	nc
7152	U	Pro	C	-	-	-	nc	7779	C	Arg	-	-	-	-	T/nc
7175	A	His	G	Arg	G	Arg	A/His	7789	G	Gly	A	Ser	-	-	nc
7185	A	Glu	-	-	-	-	G/nc	7797	A	Leu	G	-	-	-	nc
7234	G	Asp	A	Asn	-	-	nc	7852	G	Ala	A	Thr	A	Thr	nc
7237	G	Glu	A	Lys	-	-	nc	7855	A	Asn	-	-	C	His	nc
7255	G	Ala	A	Thr	-	-	nc	7929	A	Leu	G	-	-	-	nc
7257	A	Ala	G	Thr	-	-	nc	7940	C	Ala	U	Val	-	-	nc
7265	A	Asn	C	Thr	-	-	nc	7991	A	Asp	G	Gly	-	-	G/Gly
7281	C	Phe	U	-	-	-	nc	8140	U	Ile	C	Thr	-	-	nc
7312	U	Trp	G	Gly	-	-	nc	8265	A	Arg	G	-	-	-	nc
7332	C	Asp	-	-	-	-	T/nc	8343	C	Phe	U	-	-	-	nc
7338	C	Val	U	-	U	-	C/Val	8519	C	Pro	-	-	A	Gln	C/Pro
7411	U	Trp	C	Arg	-	-	nc	8630	A	Lys	G	Arg	-	-	nc
7617	U	Leu	C	-	-	-	nc	8643	G	Glu	-	-	A	-	G/nc
7654	A	Lys	G	Glu	-	-	nc	8650	A	Lys	G	Arg	-	-	nc
7666	G	Ala	A	Thr	A	Thr	G/Ala	8652	C	Thr	U	-	-	-	nc
7718	C	Pro	U	Leu	-	-	nc	8656	A	Lys	G	-	-	-	nc
7741	U	Tyr	C	Arg	-	Cys	nc	8706	G	Glu	-	-	A	-	nc

Sequences from the 3' splice site of mRNA^{src} through the coding regions of the *src* sequences of the PrC (2), SR-A (3) and PrA strains are shown. nt, nucleotide coordinates from the PrC *src* sequence. -, no change from PrC sequence; x, mutation in intron; Δ, comparison with previous sequence of PrA *src* gene (1); nc, no change.

REFERENCES

- (1) Fincham, V. and Wyke, J. (1986). *J. Virol.* 58: 694-699. (2) Schwartz, D., Tizard, R, Gilbert, W. (1983) *Cell* 32: 853-869. (3) Czernilofsky, P., Levinson, A.D., Varmus, H.E., Bishop, J.M., Goodman, H. (1983) *Nature* 301: 736-739.