

Table IV Examples of estimated copy numbers per cell^a

Protein	Literature/ theoretical	HeLa cells	Differentiated ^b CaCo-2 cells	Undifferentiated ^b CaCo-2 cells	Normal mucosa (N)	Carcinoma (A)
Linker histone H1	3.0×10^7	3.3×10^7	4.3×10^7	1.2×10^7	2.4×10^7	1.9×10^7
Core histones	2.4×10^8	1.6×10^8	1.7×10^8	4.4×10^8	1.1×10^8	1.5×10^8
Linker histones/ nucleosome ^c	1	1.1	1.4	0.4	0.8	0.6
Core histones/nucleosome	8	5.2	5.7	14	3.5	4.9
RNA Pol II largest subunit ^d	3.2×10^5	2.2×10^5	$1.2 \pm 0.1 \times 10^5$	$1.3 \pm 0.2 \times 10^5$	$1.6 \pm 1.5 \times 10^4$	$2.6 \pm 1.4 \times 10^4$
General transcription factor IIB	2.2×10^5	1.7×10^5	$6.7 \pm 1.1 \times 10^4$	$5.8 \pm 0.9 \times 10^4$	$1.9 \pm 0.7 \times 10^5$	$2.5 \pm 1.0 \times 10^5$
General transcription factor IIE1	1.3×10^5	1.7×10^5	$4.0 \pm 1.1 \times 10^4$	$1.2 \pm 0.3 \times 10^5$	$1.1 \pm 0.4 \times 10^4$	$3.0 \pm 1.8 \times 10^4$
General transcription factor IIE2	3.6×10^5	3.5×10^5	$1.3 \pm 0.4 \times 10^5$	$2.5 \pm 0.4 \times 10^5$	$1.3 \pm 1.8 \times 10^5$	$6.4 \pm 5.2 \times 10^4$
General transcription factor IIF1	1.6×10^5	5.3×10^5	$1.7 \pm 0.3 \times 10^5$	$3.1 \pm 0.3 \times 10^5$	$1.5 \pm 1.8 \times 10^5$	$1.9 \pm 0.6 \times 10^5$
General transcription factor IIE2	3.2×10^5	9.6×10^5	$2.0 \pm 0.3 \times 10^5$	$3.8 \pm 0.9 \times 10^5$	$6.1 \pm 3.0 \times 10^4$	$1.2 \pm 0.5 \times 10^5$
Total proteins ^e	7.9×10^9 2.6×10^9	8.3×10^9	$4.1 \pm 0.5 \times 10^9$	$4.3 \pm 0.7 \times 10^9$	$4.8 \pm 2.4 \times 10^9$	$4.8 \pm 2.3 \times 10^9$

^aCalculations were performed assuming an average HeLa cell volume of $2800 \mu\text{m}^3$ (calculated using an average diameter of $17.5 \mu\text{m}$) the enterocyte volume of $1400 \mu\text{m}^3$ (average of values from references, Buschmann and Manke, 1981; MacLeod *et al.*, 1991; Crowe and Marsh, 1993) and the average cellular protein content of 20% of the cell (Ellis, 2001).

^bThe 'Differentiated' and 'Undifferentiated' CaCo-2 cells refer to cells harvested at confluence and 11 days after the confluence, respectively. Theoretical values for histones are given in italics.

^cThe number of nucleosomes was calculated using the value 2×2.85 billion base pairs (International Human Genome Sequencing Consortium, 2004) for diploid human cell, and 190bp DNA per nucleosome (Yanagawa *et al.*, 2001).

^dThe literature values for RNA II polymerase subunits are from reference (Kimura *et al.*, 1999) the HeLa cell.

^eThe values are from references Lodish *et al.* (2000) and Princiotta *et al.* (2003).