In the article “The primary structure of the human leukocyte antigen CD37, a species homologue of the rat MRC OX-44 antigen” by B.J. Classon, A.F. Williams, A.C. Willis, B. Seed, and I. Stamenkovic (April 1989, 169:1497), the reported sequence for human CD37 is incorrect because two guanosines were assigned at nucleotides 747-748 when, in fact, three are present at this position. The human CD37 cDNA was originally sequenced (B.J. Classon and A.F. Williams) for both strands with T7 DNA polymerase and dGTP reagents, but the single nucleotide omission was not evident until the rat CD37 homologue was sequenced. Resequencing of human CD37 with dITP reagents revealed three guanosines in the position, consistent with the rat sequence. As a result, the reading frame is shifted 16 amino acid residues before the COOH terminus. The corrected sequence is shown below, aligned with the rat sequence. The overall pattern of putative transmembrane segments (shown overlined) is now very similar to that reported for the human melanoma-associated antigen ME491 (Hotta et al. 1988. Cancer Res. 48:2955), and the two amino acid sequences show significant relatedness. The rat CD37 data also establish that rat OX44 is not CD37, but rather a separate, closely related gene product.

Figure 1. Revised human CD37 sequence aligned with the rat CD37 sequence. A partial rat CD37 cDNA clone was isolated from a plasmid library, and the complete rat sequence was completed by PCR on a second library using a 5' vector-based oligonucleotide and 3' oligonucleotides based on the nucleotide sequence of the partial cDNA clone. Amino acid identities are boxed, and bold overlines indicate the four putative transmembrane sequences. These sequence data have been deposited in the EMBL/GenBank Data Libraries under the accession numbers X14046 (human) and X53517 (rat).