

Trejo Supplemental Appendix 1

A list of Swiss-Protein (Swiss-Prot.) and TrEMBL entries of human GPCR's were obtained from the GPCRDB (<http://www.gpcr.org/7tm/>). The list of GPCR entries was submitted to ExPASy (<http://us.expasy.org>) for retrieval of 890 Swiss-Prot/TrEMBL sequences. The sequences were aligned using ClustalX (Thompson et al. 1997. *Nucleic Acids Res.* 24:4876--82). The 720 GPCR sequences which contained a NPhhY-like motif at the end of the seventh transmembrane helix were selected for further analysis. The sequences were truncated immediately after the tyrosine of the [N/D]PX₂₋₃Y-like motif of the seventh transmembrane helix and written as a FASTA format file for the ensuing motif searches. A search for clusters of serine and threonine residues occupying 3 out of 3 [S/T]-[S/T]-[S/T], or 3 out of 4 [S/T]-[S/T]-[S/T]-X, or 4 out of 5 [S/T]-[S/T]-[S/T]-[S/T]-X consecutive positions, where X is any amino acid and can occupy any position was completed using ScanProsite (Gattiker et al. 2002. *Appl. Bioinform.* 1:107--8). Of these, several sequences were confirmed to be known GPCRs (excluding sensory and orphan receptors, and psuedogenes) and aligned starting with the [N/D]PX₂₋₃Y-like motif. The list includes the GPCR family name and nomenclature according to the International Union of Pharmacology (IUPHAR) (Foord et al. 2003. *Pharmacol. Rev.* 55:587--89) and the Swiss-Protein accession number (<http://ca.expasy.org/sprot/>).

Amino Acid Designations

Amino acid residues are designated according to the single letter code: A, alanine; C, cysteine; D, aspartate; E, glutamate; F, phenylalanine; G, glycine; H, histidine; I, isoleucine; K, lysine; L, leucine; M, methionine; N, asparagine; P, proline; Q, glutamine; R, arginine; S, serine; T, threonine; V, valine; W, tryptophan; Y, tyrosine; and X is any amino acid. In some cases, numbers of amino acids were omitted either before or after the motif and are shown in parentheses. The period indicates the end of the C-tail sequence. The list includes the GPCR family name and nomenclature according to the International Union of Pharmacology (IUPHAR) (Foord *et al.* *Pharmacol Rev.* 2003, 55:587-9) and the Swiss-Protein accession number (<http://ca.expasy.org/sprot/>).