

IUPHAR

Guidelines for classification of new receptor-subtypes

- Mammalian receptor systems are the basis of IUPHAR classifications. The nomenclature may extend to other vertebrates if useful and provided it does not compromise the mammalian classification. Evolutionary changes may be so great that invertebrate receptors are difficult to classify within mammalian-based nomenclature.

- The receptor should be named after the endogenous agonist, or the appropriate collective term, when a family of related substances may interact with the receptor.

- The agonist abbreviation, followed by a numerical subscript, is to be preferred in naming new receptors. Further subdivision by subscript letters is allowed when there is a strong basis for grouping receptors together.

- Species homologues should not be given separate names, but the species should be identified if necessary by a lower case prefix, i.e. m 5-HT_{2A} or h 5-HT_{2A} for the mouse and human receptor respectively. A list of species abbreviations is given in table 1. If necessary, further strain differences should be defined in the text.

Table 1. Proposed list of species abbreviations to precede the receptor name, where further precision is required, e.g. h 5-HT_{1A}.

b bovine, ca canine, ch chick, e equine, f feline, gp guinea pig, h human, mk monkey, m mouse, p porcine, rb rabbit, r rat.

- Recombinant receptors without well defined functional characteristics should be referred to by lower case letters, i.e. 5-ht₆, 5-ht_{1f} or α_{1d} . When the recombinant receptor is shown to be of functional relevance in whole tissues and is fully characterised, upper case letters should then be used, e.g. 5-HT₆ or α_{1D} . When there is strong pharmacological evidence for a new receptor, but the amino acid sequence has not been defined, the receptor will be referred to in upper case italics, e.g. *H₃* histamine receptor.

- New splice variants, if pharmacologically relevant, should be indicated by subscript letters in lower case, in parentheses, e.g. EP_{3(a)}, EP_{3(b)}, EP_{3(c)} receptor.

- Greek letters and Roman numerals should be avoided in any new nomenclature. The name should not include the letter "R" or "r" as an abbreviation for receptor. Where subscripts are used, there should never be subscripts to an existing subscript.

- Distinct names should be used for G-protein linked receptors and ligand-gated ion channel receptors activated by the same agonist so that in the future the distinction does not depend solely on numerical subscript as presently occurs for the 5-HT₃ receptor.