

## Histamine receptors in GtoPdb v.2021.3

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### Abstract

Histamine receptors (**nomenclature as agreed by the NC-IUPHAR Subcommittee on Histamine Receptors [80, 173]**) are activated by the endogenous ligand [histamine](#). Marked species differences exist between histamine receptor orthologues [80]. The human and rat H<sub>3</sub> receptor genes are subject to significant splice variance [12]. The potency order of histamine at histamine receptor subtypes is H<sub>3</sub> = H<sub>4</sub> > H<sub>2</sub> > H<sub>1</sub> [173]. Some agonists at the human H<sub>3</sub> receptor display significant ligand bias [182]. Antagonists of all 4 histamine receptors have clinical uses: H<sub>1</sub> antagonists for allergies (*e.g.* [cetirizine](#)), H<sub>2</sub> antagonists for acid-reflux diseases (*e.g.* [ranitidine](#)), H<sub>3</sub> antagonists for narcolepsy (*e.g.* [pitolisant](#)/WAKIX; Registered) and H<sub>4</sub> antagonists for atopic dermatitis (*e.g.* [adriforant](#); Phase IIa) [173] and vestibular neuritis (AUV) (SENS-111 (Seliforant, previously UR-63325), entered and completed vestibular neuritis (AUV) Phase IIa efficacy and safety trials, respectively) [216, 8].

### Contents

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### Histamine receptors

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### Introduction to Histamine receptors

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#### Receptors

##### H<sub>1</sub> receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=262>

##### H<sub>2</sub> receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=263>

##### H<sub>3</sub> receptor

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##### H<sub>4</sub> receptor

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