

## Orexin receptors in GtoPdb v.2023.1

Gary Aston-Jones<sup>1</sup>, Pascal Bonaventure<sup>2</sup>, Paul Coleman<sup>3</sup>, Luis de Lecea<sup>4</sup>, Debbie Hartman<sup>5</sup>, Daniel Hoyer<sup>6</sup>, Laura Jacobson<sup>7</sup>, Thomas Kilduff<sup>8</sup>, Jyrki P. Kukkonen<sup>9</sup>, Terrence P. McDonald<sup>10</sup>, Rod Porter<sup>11</sup>, John Renger<sup>3</sup>, Takeshi Sakurai<sup>12</sup>, Jerome M Siegel<sup>13</sup>, Gregor Sutcliffe<sup>4</sup>, Neil Upton<sup>11</sup>, Christopher J. Winrow<sup>3</sup> and Masashi Yanagisawa<sup>12</sup>

1. Rutgers University, USA
2. Janssen Research & Development, USA
3. Merck Research Laboratories, USA
4. Scripps Research Institute, USA
5. Centessa Pharmaceuticals, USA
6. University of Melbourne, Australia
7. Florey Institute of Neuroscience and Mental Health, Australia
8. SRI International, USA
9. University of Helsinki, Finland
10. Merck and Co., USA
11. GlaxoSmithKline, UK
12. University of Tsukuba, Japan
13. University of California Los Angeles, USA

### Abstract

Orexin receptors (**nomenclature as agreed by the NC-IUPHAR Subcommittee on Orexin receptors [43]**) are activated by the endogenous polypeptides [orexin-A](#) and [orexin-B](#) (also known as hypocretin-1 and -2; 33 and 28 aa) derived from a common precursor, [preproorexin or orexin precursor](#), by proteolytic cleavage and some typical peptide modifications [117]. Orexin signaling has been associated with regulation of sleep and wakefulness, reward and addiction, appetite and feeding, pain gating, stress response, anxiety and depression. Currently the orexin receptor ligands in clinical use are the dual orexin receptor antagonists [suvorexant](#) and [lemborexant](#) and [daridorexant](#), which are used as hypnotics, and several dual and OX<sub>2</sub>-selective antagonists are under development. Multiple orexin agonists are in development for the treatment of narcolepsy and other sleep disorders. Orexin receptor 3D structures have been solved [146, 144, 55, 126, 47, 109, 7, 145].

### Contents

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### Orexin receptors

<https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=51>

### Introduction to Orexin receptors

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#### Receptors

##### OX<sub>1</sub> receptor

<https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=321>

##### OX<sub>2</sub> receptor

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