

MRGPRX4 Receptor Agonists and Antagonists

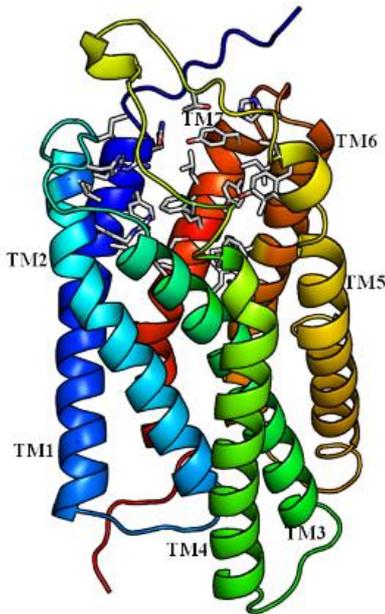
New drug target for treating open and closed wounds as well as chronic pain and itch

Invention

G protein-coupled receptors (GPCRs) are the largest group of membrane receptor proteins and represent the most successful targets of drug therapy. The MRGPRX (mas-related G protein-coupled receptor X) subfamily is only expressed in primates including humans and belongs to the group of orphan receptors, for which the cognate agonists are unknown.

The human MRGPRX4 receptor represents a fundamentally new drug target, and the development of potent MRGPRX4 receptor agonists, partial agonists, and antagonists / inverse agonists to be used for the treatment of MRGPRX4-associated conditions, disorders or diseases requires the design of novel drugs. Relating thereto, the development of potent and selective MRGPRX4 receptor antagonists is a basic need for the design of drugs for alleviating, preventing and/or treating conditions, diseases and disorders connected to MRGPRX4 function, particularly for, but not limited to the use for treating open or closed wounds, e.g. for wound healing, and for the treatment of different types of pain and itch.

The technology embodies potent and selective MRGPRX4 receptor agonists and antagonists, that may especially be used for treating pain and inflammatory conditions, such as neuropathic or chronic pain, itch, skin diseases, immune diseases, and cancer.



Model of MRGPRX4 Receptor

Commercial Opportunities

PROvendis is offering licenses for the invention to interested companies on behalf of the University of Bonn. There is also the possibility of collaboration with the inventor.

Current Status

In vitro characterization in recombinant and native cancer cells.

Relevant Publications

Publications in preparation.

An invention of University of Bonn.

Competitive Advantages

- New drug target for several diseases, e.g.
 - ▶ Neuropathic pain
 - ▶ Itching
 - ▶ Skin inflammation
 - ▶ Chronic pain
 - ▶ Open wounds &
 - ▶ Closed wounds

Technology Readiness Level

1 2 3 4 5 6 7 8 9

Technology concept formulated

Industries

- Pharmaceutical

Ref. No.

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