

# GPR143 binds L-Dopa

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## Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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## Literature references

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Reactome database release: 76

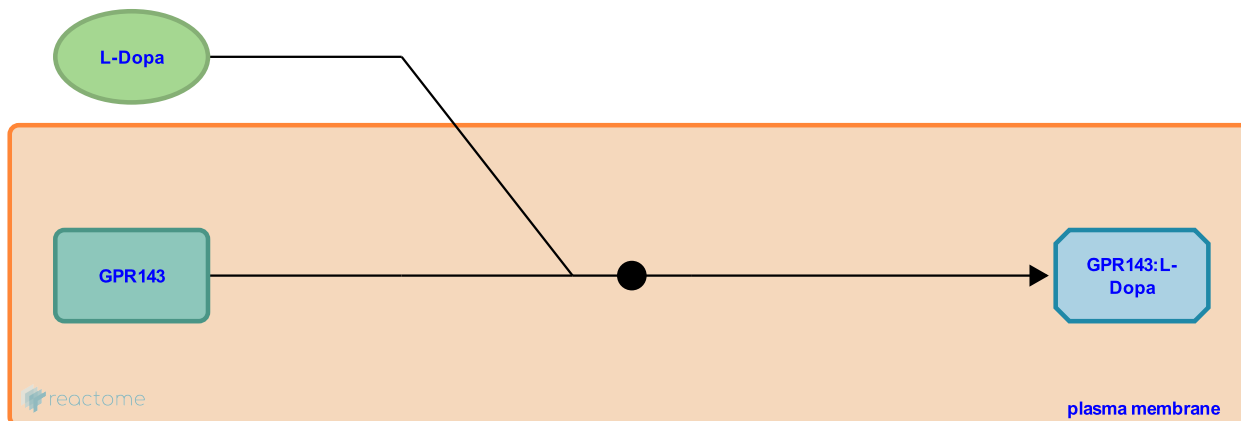
This document contains 1 reaction ([see Table of Contents](#))

## GPR143 binds L-Dopa [↗](#)

**Stable identifier:** R-HSA-8851298

**Type:** binding

**Compartments:** plasma membrane, extracellular region



GPR143, also known as Ocular albinism 1 (OA1) binds L-dopamine (L-Dopa) (Lopez et al. 2008, Hiroshima et al. 2014), the precursor to the neurotransmitters dopamine, norepinephrine (noradrenaline), and epinephrine (adrenaline) collectively known as catecholamines. L-Dopa is in intermediate of melanin biosynthesis (Aroca et al. 1993, Roffler-Tarlov et al. 2013). GPR143 is present on the apical cell surface of retinal pigment epithelial cells (Lopez et al. 2008).

GPR143 can associate with several Galpha subunits, Gbeta and arrestin (Schiaffino & Tacchetti 2005, Innamorati et al. 2006). Its signalling is pertussis toxin sensitive and therefore likely to be mediated by Gq (Lopez et al. 2008).

### Literature references

Lopez, VM., Decatur, CL., Stamer, WD., Lynch, RM., McKay, BS. (2008). L-DOPA is an endogenous ligand for OA1. *PLoS Biol.*, 6, e236. [↗](#)

### Editions

2016-01-06	Authored, Edited	Jupe, S.
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