SIGMAR1 binds dextromethorphan

Jassal, B., Shoichet, BK.
**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**


Reactome database release: 77

This document contains 1 reaction (see Table of Contents)
SIGMAR1 binds dextromethorphan

**Stable identifier:** R-HSA-9679816

**Type:** binding

**Compartments:** cytosol, extracellular region

The antitussive drug dextromethorphan can elicit antidepressant-like actions at least in part through binding and stimulating the sigma non-opioid intracellular receptor 1 (SIGMAR1) (Lauterbach 2012, Fishback et al. 2010). Its endogenous ligand may be progesterone (Ganapathy et al. 1999). Small anecdotal studies suggest that ligands that target SIGMAR1 may be useful in treating central hypoventilation syndromes (Loiseau et al. 2018), suggesting a possible role for such drugs in treatment of COVID-19 symptoms.

**Literature references**


**Editions**

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