

# G protein-coupled estrogen receptor 1 binds estrogen non-classically

Bockaert, J., D'Eustachio, P., Jassal, B.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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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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- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
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- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

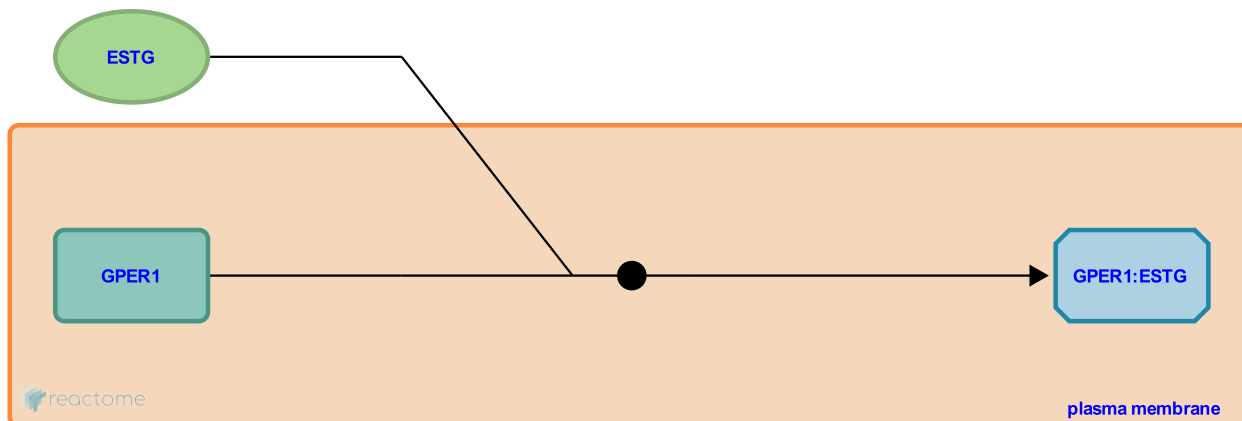
This document contains 1 reaction ([see Table of Contents](#))

## G protein-coupled estrogen receptor 1 binds estrogen non-classically [↗](#)

**Stable identifier:** R-HSA-374207

**Type:** binding

**Compartments:** extracellular region, plasma membrane



G protein-coupled estrogen receptor 1 (GPER; CEPR; G-protein coupled receptor 30, GPR30) (Feng Y and Gregor P, 1997) has a ubiquitous tissue distribution. This orphan receptor is unrelated to nuclear estrogen receptors, but shows all the binding and signaling characteristics of a membrane estrogen receptor (mER). This suggests a role for GPCRs in nonclassical steroid hormone actions.

### Literature references

Pang, Y., Thomas, P., Dong, J., Filardo, E J. (2005). Identity of an estrogen membrane receptor coupled to a G protein in human breast cancer cells. *Endocrinology*, 146, 624-32. [↗](#)

### Editions

2008-08-21	Authored	Jassal, B.
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