

## G protein-coupled estrogen receptor (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database

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### Abstract

The G protein-coupled estrogen receptor (GPER, **nomenclature as agreed by the NC-IUPHAR Subcommittee on the G protein-coupled estrogen receptor [24]**) was identified following observations of estrogen-evoked [cyclic AMP](#) signalling in breast cancer cells [2], which mirrored the differential expression of an orphan 7-transmembrane receptor GPR30 [5]. There are observations of both cell-surface and intracellular expression of the GPER receptor [27, 32]. Selective agonist/ antagonists for GPER have been characterized [24]. Antagonists of the nuclear estrogen receptor, such as [asfulvestrant](#) [10], [tamoxifen](#) [27, 32] and [raloxifene](#) [23], as well as the flavonoid 'phytoestrogens' [genistein](#) and [quercetin](#) [16], are agonists of GPER. A complete review of GPER pharmacology has been recently published [24]. The roles of GPER in physiological systems throughout the body (cardiovascular, metabolic, endocrine, immune, reproductive) and in cancer have also been reviewed [24, 25, 18, 15, 8].

### Contents

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[G protein-coupled estrogen receptor](#)

<http://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=22>

Introduction to G protein-coupled estrogen receptor

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Receptors

GP<sub>ER</sub>

<http://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=221>

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