1A. Thyroid hormone receptors in GtoPdb v.2023.1

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Abstract

Thyroid hormone receptors (TRs, nomenclature as agreed by the NC-IUPHAR Subcommittee on Nuclear Hormone Receptors [12, 21]) are nuclear hormone receptors of the NR1A family, with diverse roles regulating macronutrient metabolism, cognition and cardiovascular homeostasis. TRs are activated by thyroxine (T₄) and thyroid hormone (triiodothyronine). Once activated by a ligand, the receptor acts as a transcription factor either as a monomer, homodimer or heterodimer with members of the retinoid X receptor family. NH-3 has been described as an antagonist at TRs with modest selectivity for TRβ [42].

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Database links

1A. Thyroid hormone receptors
https://www.guidetopharmacology.org/GRAC/FamilyDisplayForward?familyId=84

Introduction to 1A. Thyroid hormone receptors
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Thyroid hormone receptor-α
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=588
Thyroid hormone receptor-β
https://www.guidetopharmacology.org/GRAC/ObjectDisplayForward?objectId=589


43. Schueler PA, Schwartz HL, Strait KA, Mariash CN and Oppenheimer JH. (1990) Binding of 3,5,3'-triiodothyronine (T3) and its analogs to the in vitro translational products of c-erbA protooncogenes: differences in the affinity of the alpha- and beta-forms for the acetic acid analog and failure of the human testis and kidney alpha-2 products to bind T3. Mol Endocrinol 4: 227-34 [PMID:2158622]
55. Wood WM, Ocran KW, Gordon DF and Ridgway EC. (1991) Isolation and characterization of mouse complementary DNAs encoding alpha and beta thyroid hormone receptors from thyrotrope cells: the mouse pituitary-specific beta 2 isoform differs at the amino terminus from the corresponding species from rat pituitary tumor cells. Mol Endocrinol 5: 1049-61 [PMID:1944303]