Vitamin D, pregnene X and constitutive androstane

Overview: Vitamin D (VDR), pregnene X (PXR) and constitutive androstane (CAR) receptors (nomenclature as agreed by NC-IUPHAR Committee on Nuclear Receptors, Moore *et al.*, 2006) are members of the NR1I family of nuclear receptors, which form heterodimers with members of the retinoid X receptor family. PXR and CAR are activated by a range of exogenous compounds, with no established endogenous physiological agonists, although high concentrations of bile acids and bile pigments activate CAR (see Moore *et al.*, 2006).

Nomenclature	VDR	PXR	CAR
Systematic nomenclature	NR1I1	NR1I2	NR1I3
Other names	1,25-dihydroxyvitamin D3 receptor	Orphan nuclear receptor PAR1, pregnane-activated receptor, steroid and xenobiotic receptor, SXR	Constitutive activator of retinoid response, constitutive active response, orphan nuclear receptor MB67
Ensembl ID	ENSG00000111424	ENSG00000144852	ENSG00000143257
Selective agonists	1,25-Dihydroxyvitamin D_3	5β-Pregnane-3,20-dione, estradiol (Jones *et al.*, 2000), hyperforin (Wentworth *et al.*, 2000), lovastatin (Lehmann *et al.*, 1998), rifampicin (Blumberg *et al.*, 1998; Lehmann *et al.*, 1998)	TCPOBOP (Tzameli *et al.*, 2000)
Selective antagonists	TEI9647 (Miura *et al.*, 1999)	–	–

Abbreviations: TEI9647, (23*S*)-25-dehydro-1α hydroxyvitamin D_3-26,23-lactone; **TCPOBOP**, 1,4-bis-[2-(3,5-dichloropyridyloxy)]benzene

Further Reading

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