

CAR-LBD (residues 101-348)

Constitutive Androstane Receptor, Ligand Binding Domain

human, recombinant, *E. coli*

Cat. No.	Amount
PR-874	10 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.

Application

Use only for research. CAR-LBD can be applied in *in vitro* transcription assays, DNA-protein and protein-protein interaction assays.

Activity

20-200 ng is sufficient for an *in vitro* transcription assay and 100 ng are sufficient for a protein-protein interaction assay.

Molecular Weight

27 kDa

Purity

> 95% by SDS-PAGE

Description

Recombinant His tagged CAR-LBD was expressed in an *E. coli* system and purified by affinity and FPLC chromatography.

The constitutive androstane receptor (CAR) was identified as a member of the orphan nuclear hormone receptor family in 1994. Although constitutively active, it can be further activated by 'phenobarbital-like' compounds, the most potent being the synthetic compound TCPOBOP. Upon activation, CAR regulates the xenobiotic drug metabolizing enzymes, cytochrome P450s. There are several overlapping functions between the nuclear receptors PXR and CAR. Recently, CAR, as well as PXR, have been shown to place a role in bile acid clearance and cholestatic liver injury.

Selected References:

- Baes *et al.* (1994) A new orphan member of the nuclear hormone receptor superfamily that interacts with a subset of retinoic acid response elements. *Mol. Cell Biol.* **14**:1544.
Wei *et al.* (2000) The nuclear receptor CAR mediates specific xenobiotic induction of drug metabolism. *Nature* **407**:920.
Wei *et al.* (2002) Specific and overlapping functions of the nuclear hormone receptors CAR and PXR in xenobiotic response. *Pharmacogenomics J.* **2**:117.
Huang *et al.* (2003) Induction of bilirubin clearance by the constitutive androstane receptor (CAR). *PNAS USA* **100**:4156.
Saini *et al.* (2004) A novel constitutive androstane receptor-mediated and CYP3A-independent pathway of bile acid detoxification. *Mol. Pharmacol.* **65**:292.
Stedman *et al.* (2005) Nuclear receptors constitutive androstane receptor and pregnane X receptor ameliorate cholestatic liver injury. *PNAS USA* **102**:2063.