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Anti-CBR1 Antibody

Catalog # AP51049

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P16152
Reactivity	Human, Mouse, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	30375

Additional Information

Gene ID	873
Other Names	CBR; CRN; Carbonyl reductase [NADPH] 1; 15-hydroxyprostaglandin dehydrogenase [NADP(+)]; NADPH-dependent carbonyl reductase 1; Prostaglandin 9-ketoreductase; Prostaglandin-E(2) 9-reductase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human CBR1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	CBR1 (HGNC:1548)
Synonyms	CBR, CRN, SDR21C1
Function	NADPH-dependent reductase with broad substrate specificity. Catalyzes the reduction of a wide variety of carbonyl compounds including quinones, prostaglandins, menadione, plus various xenobiotics. Catalyzes the reduction of the antitumor anthracyclines doxorubicin and daunorubicin to the cardiotoxic compounds doxorubicinol and daunorubicinol (PubMed:15799708, PubMed:17344335, PubMed:17912391, PubMed:18449627, PubMed:18826943, PubMed:1921984, PubMed:7005231). Can convert prostaglandin E to prostaglandin F2-alpha (By similarity). Can bind glutathione, which explains its higher affinity for glutathione- conjugated substrates. Catalyzes the reduction of S-nitrosoglutathione (PubMed:17344335, PubMed:18826943). In addition, participates in the glucocorticoid metabolism by catalyzing the NADPH-dependent

cortisol/corticosterone into 20beta-dihydrocortisol (20b-DHF) or 20beta-corticosterone (20b-DHB), which are weak agonists of NR3C1 and NR3C2 in adipose tissue (PubMed:28878267).

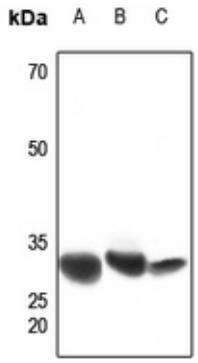
Cellular Location Cytoplasm.

Tissue Location Expressed in kidney (at protein level).

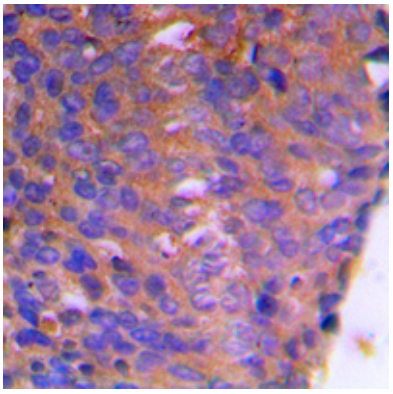
References

Wermuth B.,et al.J. Biol. Chem. 263:16185-16188(1988).
Forrest G.L.,et al.Biochim. Biophys. Acta 1048:149-155(1990).
Forrest G.L.,et al.Mol. Pharmacol. 40:502-507(1991).
Watanabe K.,et al.Genomics 52:95-100(1998).
Terada T.,et al.Submitted (OCT-2003) to the EMBL/GenBank/DDBJ databases.

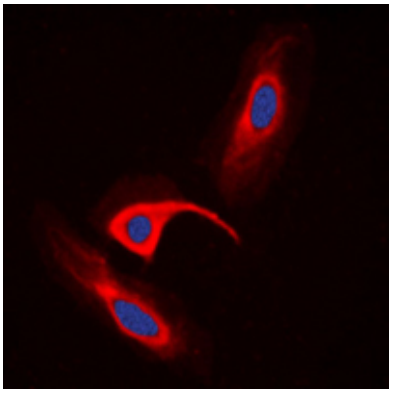
Images



Western blot analysis of CBR1 expression in mouse liver (A), rat liver (B), rat kidney (C) whole cell lysates. (Predicted band size: 30 kD; Observed band size: 30 kD)



Immunohistochemical analysis of CBR1 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of CBR1 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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