CBR1 Protein, Human (P.pastoris, His)

Cat. No.:	HY-P72272
Synonyms:	Carbonyl Reductase 1; SDR21C1
Species:	Human
Source:	P. pastoris
Accession:	P16152 (S2-W277)
Gene ID:	873
Molecular Weight:	Approximately 33.0 kDa

PROPERTIES

AA Sequence	S S G I H V A L V T G G N K G I G L A I V R D L C R L F S G D V V L T A R D V T R G Q A A V Q Q L Q A E G L S P R F H Q L D I D D L Q S I R A L R D F L R K E Y G G L D V L V N N A G I A F K V A D P T P F H I Q A E V T M K T N F F G T R D V C T E L L P L I K P Q G R V V N V S S I M S V R A L K S C S P E L Q Q K F R S E T I T E E E L V G L M N K F V E D T K K G V H Q K E G W P S S A Y G V T K I G V T V L S R I H A R K L S E Q R K G D K I L L N A C C P G W V R T D M A G P K A T K S P E E G A E T P V Y L A L L P P D A E G P H G Q F V S E K R V E Q W
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from 0.2 μm filtered solution in 20 mM Tris-HC1, 0.5 M NaCl, 3% Trehalose, pH 8.0.
Endotoxin Level	<1.0 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	CBR1, an NADPH-dependent reductase, exhibits broad substrate specificity and plays a pivotal role in the reduction of diverse carbonyl compounds, encompassing quinones, prostaglandins, menadione, and various xenobiotics. Notably, CBR1 catalyzes the conversion of the antitumor anthracyclines doxorubicin and daunorubicin into their cardiotoxic counterparts, doxorubicinol and daunorubicinol. Moreover, it demonstrates the ability to transform prostaglandin E into prostaglandin

F2-alpha, highlighting its versatility in substrate recognition. The enzyme's interaction with glutathione, evidenced by binding to glutathione-conjugated substrates, further elucidates its higher affinity for specific compounds. Additionally, CBR1 participates in glucocorticoid metabolism by facilitating the NADPH-dependent conversion of cortisol/corticosterone to 20beta-dihydrocortisol (20b-DHF) or 20beta-corticosterone (20b-DHB), both of which act as weak agonists for NR3C1 and NR3C2 in adipose tissue.

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