
Product Data Sheet

Product Name: AKR1C3 Human

Cat. No.: GP21378

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	DD3; DDX; HAKRB; HAKRe; HA1753; HSD17B5; hluPGFS; KIAA0119; AKR1C3; Aldo-keto reductase family 1 member C3; 3-alpha-HSD type 2; 17-beta-HSD 5; PGFS; DD-3.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MDSKHQCVKL NDGHFMPVLG FGTYAPPEVP RSKALEVTKL AIEAGFRHID SAHLYNNEEQ VGLAIRSKIA DGSVKREDIF YTSKLWSTFH RPELVRPALE NSLKKAQLDY VDLYLIHSPM SLKPGEELSP TDENGVIFD IVDLCTTWEA MEKCKDAGLA KSIGVSNFNR RQLEMILNKPGLKYKPCVNQ VECHPYFNRS KLLDFCKSKD IVLVAYSALG SQRDKRWVDP NSPVLLEDPV LCALAKKHKR TPAIALRYQ LQRGVVVLAK SYNEQRIRQN VQVFEFQLTA EDMKAIDGLD RNLHYFNSDS FASHPNYPYS DEY.		
Formulation	The AKR1C3 solution contains 20mM Tris-HCl pH-8 and 10% glycerol.		

Introduction

AKR1C3 is part of the aldo/keto reductase superfamily, which has at least 40 identified proteins. AKR1C3 catalyzes the conversion of aldehydes and ketones to their corresponding alcohols by utilizing NADH and/or NADPH as cofactors. AKR1C3 displays overlapping but distinct substrate specificity. AKR1C3 catalyzes the reduction of prostaglandin (PG) D₂, PGH₂ and phenanthrenequinone (PQ), and the oxidation of 9 α ,11 β -PGF₂ to PGD₂. AKR1C3 is involved in the pathogenesis of allergic diseases such as asthma. AKR1C3 controls cell growth and/or differentiation. AKR1C3 takes part in adrenal testosterone production. AKR1C3 expression is affected by metabolic disease, and its levels are considerably reduced in response to diet-induced weight loss and correlate with leptin levels.

Biological Activity

Caution: Product has not been fully validated for medical applications. For research use only.

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Specific activity: approximately < 0.1 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme catalyzing the oxidation of 1 micromole NADPH per minute at 25°C. Specific activity was expressed as units/mg protein.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

AKR1C3 Human Recombinant fused to 20 amino acid His Tag at N-terminal produced in E. Coli is a single, non-glycosylated, polypeptide chain containing 343 amino acids (1-323 a.a.) and having a molecular mass of 39 kDa. The AKR1C3 is purified by proprietary chromatographic techniques.

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