SORD Protein, Human (HEK293, His)

Cat. No.:	HY-P71328
Synonyms:	Sorbitol Dehydrogenase; L-Iditol 2-Dehydrogenase; SORD
Species:	Human
Source:	HEK293
Accession:	AAH21085.1 (A2-P357)
Gene ID:	6652
Molecular Weight:	39 kDa

PROPERTIES

AA Sequence	A A A A K P N N L S L V V H G P G D L R L E N Y P I P E P G P N E V L L R M H S V G I C G S D V H Y W E Y G R I G N F I V K K P M V L G H E A S G T V E K V G S S V K H L K P G D R V A I E P G A P R E N D E F C K M G R Y N L S P S I F F C A T P P D D G N L C R F Y K H N A A F C Y K L P D N V T F E E G A L I E P L S V G I H A C R R G G V T L G H K V L V C G A G P I G M V T L L V A K A M G A A Q V V V T D L S A T R L S K A K E I G A D L V L Q I S K E S P Q E I A R K V E G Q L G C K P E V T I E C T G A E A S I Q A G I Y A T R S G G T L V L V G L G S E M T T V P L L H A A I R E V D I K G V F R Y C N T W P V A I S M L A S K S V N V K P L V T H R F P L E K A L E A F E T F K K G L G L K I M L K C D P S D Q N P
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 0.2 M NaCl, 5 mM DTT, 20% Glycerol, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Sorbitol dehydrogenase (SPRD) is an enzyme that in humans is encoded by the SORD gene. SPRD is a polyol dehydrogenase that catalyzes the reversible NAD+-dependent oxidation of various sugar alcohols, which is mostly active with D-sorbitol (D-glucitol), L-threitol, xylitol and ribitol as substrates, leading to the C2-oxidized products D-fructose, L-erythrulose, D-xylulose, and D-ribulose, respectively. SPRD is a key enzyme in the polyol pathway that interconverts glucose and fructose

via sorbitol, which constitutes an important alternate route for glucose metabolism. The polyol pathway is believed to be involved in the etiology of diabetic complications, such as diabetic neuropathy and retinopathy, induced by hyperglycemia. SPRD may play a role in sperm motility by using sorbitol as an alternative energy source for sperm motility. SPRD may have a more general function in the metabolism of secondary alcohols since it also catalyzes the stereospecific oxidation of (2R,3R)-2,3-butanediol[1][2][3][4].

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