

## Recombinant SORD protein

**Catalog No:** 81294, 81994

**Expressed In:** *E. coli*

**Quantity:** 50, 1000 µg

**Concentration:** 0.3 µg/µl

**Source:** Human

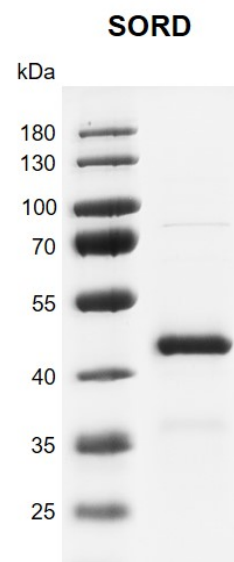
**Buffer Contents:** Recombinant SORD protein is supplied in 25 mM Tris-HCl 7.4, 500 mM NaCl, and 5% glycerol.

**Background:** SORD (Sorbitol Dehydrogenase), also called as RDH, SDH or XDH, is a polyol dehydrogenase that catalyzes the reversible NAD(+)-dependent oxidation of various sugar alcohols. It 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. SORD 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. It also may play a role in sperm motility by using sorbitol as an alternative energy source for sperm motility. Besides, SORD 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. NADP(+) cannot be used as the electron acceptor for SORD dehydrogenase activity.

**Protein Details:** Full length SORD protein (accession number NP\_003095.2) was expressed in *E. coli* cells with an N-terminal 6×His-Tag. The molecular weight of the protein is 41.9 kDa.

**Application Notes:** This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of arrival.



**Recombinant SORD protein gel**  
10% SDS-PAGE with Coomassie  
blue staining

MW: 41.9kDa

Purity: >90%