

Product name:	SODE Rabbit Polyclonal Antibody
Cat number:	ABN18100
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	Synthesized peptide derived from human SODE AA range: 67-117
Reactivity:	Human, Mouse, Rat
Applications:	WB 1:500-1:2000, IHC 1:50-1:300, ELISA 1:2000-1:20000
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene encodes a member of the superoxide dismutase (SOD) protein family. SODs are antioxidant enzymes that catalyze the conversion of superoxide radicals into hydrogen peroxide and oxygen, which may protect the brain, lungs, and other tissues from oxidative stress. Proteolytic processing of the encoded protein results in the formation of two distinct homotetramers that differ in their ability to interact with the extracellular matrix (ECM). Homotetramers consisting of the intact protein, or type C subunit, exhibit high affinity for heparin and are anchored to the ECM. Homotetramers consisting of a proteolytically cleaved form of the protein, or type A subunit, exhibit low affinity for heparin and do not interact with the ECM. A mutation in this gene may be associated with increased heart disease risk. [provided by RefSeq, Oct 2015], catalytic activity: $2 \text{ superoxide} + 2 \text{ H}^{+} = \text{O}_2 + \text{H}_2\text{O}_2$, cofactor: Binds 1 copper ion per subunit, cofactor: Binds 1 zinc ion per subunit, function: Destroys radicals which are normally produced within the cells and which are toxic to biological systems, function: Protect the extracellular space from toxic effect of reactive oxygen intermediates by converting superoxide radicals into hydrogen peroxide and oxygen, online information: Superoxide dismutase entry, polymorphism: The variant Gly-231 which is found in about 2.2% of individual displays a 10-fold increased plasma EC-SOD content due to reduced heparin-binding affinity and thus the impairment of its binding ability to endothelial cell surface, similarity: Belongs to the Cu-Zn superoxide dismutase family, subcellular location: 99% of EC-SOD is anchored to heparan sulfate proteoglycans in the tissue interstitium, and 1% is located in the vasculature in equilibrium between the plasma and the endothelium, subunit: Homotetramer, tissue specificity: Expressed in blood vessels, heart, lungs, kidney and placenta. Major SOD isoenzyme in extracellular fluids such as plasma, lymph and synovial fluid.