Recombinant Cattle AMBP Protein, His-tagged

Cat. No. AMBP-129C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Cattle AMBP Protein (Ser20-Ala203) with N-His tag was expressed in E. coli.
Species	Cattle
Source	E.coli
ProteinLength	Ser20-Ala203
Description	Antioxidant and tissue repair protein with reductase, heme-binding and radical-scavenging activities. Removes and protects against harmful oxidants and repairs macromolecules in intravascular and extravascular spaces and in intracellular compartments. Intravascularly, plays a regulatory role in red cell homeostasis by preventing heme- and reactive oxygen species-induced cell damage. Binds and degrades free heme to protect fetal and adult red blood cells from hemolysis. Reduces extracellular methemoglobin, a Fe3+ (ferric) form of hemoglobin that cannot bind oxygen, back to the Fe2+ (ferrous) form deoxyhemoglobin, which has oxygen-carrying potential. Upon acute inflammation, inhibits oxidation of low-density lipoprotein particles by MPO and limits vascular damage. Extravascularly, protects from oxidation products formed on extracellular matrix structures and cell membranes. Catalyzes the reduction of carbonyl groups on oxidized collagen fibers and preserves cellular and extracellular matrix ultrastructures. Importantly, counteracts the oxidative damage at blood-placenta interface, preventing leakage of free fetal hemoglobin into the maternal circulation. Intracellularly, has a role in

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	maintaining mitochondrial redox homeostasis. Bound to complex I of the respiratory chain of mitochondria, may scavenge free radicals and preserve mitochondrial ATP synthesis. Protects renal tubule epithelial cells from heme-induced oxidative damage to mitochondria. Reduces cytochrome c from Fe3+ (ferric) to the Fe2+ (ferrous) state through formation of superoxide anion radicals in the presence of ascorbate or NADH/NADPH electron donor cofactors, ascorbate being the preferred cofactor (By similarity).
Form	Freeze-dried powder
Molecular Mass	Predicted Molecular Mass: 20.8 kDa Accurate Molecular Mass: 28 kDa
Purity	> 97%
Applications	Positive Control; Immunogen; SDS-PAGE; WB.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.
Storage Buffer	PBS, pH7.4, containing 0.01% SKL, 1 mM DTT, 5% Trehalose and Proclin300.
Reconstitution	Reconstitute in sterile water to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

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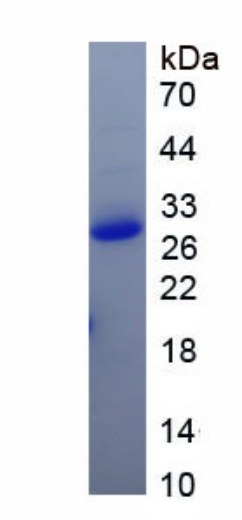
Gene Name	AMBP alpha-1-microglobulin/bikunin precursor [Bos taurus (cattle)]
Official Symbol	AMBP
Synonyms	AMBP; alpha-1-microglobulin/bikunin precursor; ITI, ITIL; protein AMBP; bikunin; complex forming glycoprotein heterogeneous in charge; EDC1; growth inhibiting protein 19; HCP; HI30; IATIL; inter alpha trypsin inhibitor light chain; ITILC; protein HC; trypstatin; uristatin; uronic acid rich protein; UTI; uronic-acid-rich protein; growth-inhibiting protein 19; inter-alpha-trypsin inhibitor light chain; complex-forming glycoprotein heterogeneous in charge; A1M; ITI; ITIL
Gene ID	280996
mRNA Refseq	NM_173989
Protein Refseq	NP_776414
UniProt ID	P00978



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