

OxiSelect Nepsilon-(carboxyethyl) lysine (CEL) ELISA Kit

OxiSelect Nepsilon-(carboxyethyl) lysine (CEL) Competitive ELISA Kit

CATALOG #

AAA44617

PRODUCT SYNONYMS

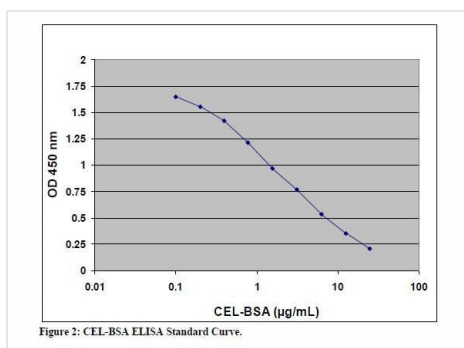
OxiSelect Nepsilon-(carboxyethyl) lysine (CEL); OxiSelect Nepsilon-(carboxyethyl) lysine (CEL) Competitive ELISA Kit; OxiSelect Ne-(carboxyethyl) lysine (CEL) Competitive ELISA Kit; OxiSelect Nepsilon-(carboxyethyl) lysine (CEL) elisa kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Upon receipt, aliquot and store the Anti-CEL Antibody, CEL-BSA Standard, CEL Conjugate and 100X Conjugate Diluent at -20 degree C to avoid multiple freeze/thaw cycles. Store all other kit components at 4 degree C.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for OxiSelect Nepsilon-(carboxyethyl) lysine (CEL) elisa kit	Principle of the assay: First, a CEL conjugate is coated on the ELISA plate. The unknown CEL protein samples or CEL-BSA standards are then added to the CEL conjugate preabsorbed plate. After a brief incubation, the anti-CEL monoclonal antibody is added, followed by an HRP conjugated secondary antibody. The content of CEL protein adducts in unknown samples is determined by comparison with the predetermined CEL-BSA standard curve. Despite the structure similarity between CEL and CML, the anti-CEL specific antibody in the OxiSelect CEL ELISA Kit will not cross react with CML protein adducts. Background: The non-enzymatic reaction of reducing carbohydrates with lysine side chains and N-terminal amino groups of macromolecules (proteins, phospholipids and nucleic acids) is called the Maillard reaction or glycation. The products of this process, termed advanced glycation end products (AGEs), adversely affect the functional properties of proteins, lipids and DNA. Tissue levels of AGE increase with age and the formation of AGEs is predominantly endogenous, though these products can also be derived from exogenous sources such as food and tobacco smoke. AGE modification of proteins can contribute to the pathophysiology of aging and long-term complications of diabetes, atherosclerosis and renal failure. AGEs also interact with a variety of cell-surface AGE-binding receptors (RAGE), leading either to their endocytosis and degradation or to cellular activation and pro-oxidant or pro-inflammatory events. Although several AGE structures have been reported, it was demonstrated that Nepsilon-(carboxymethyl) lysine (CML) and Nepsilon-(carboxyethyl) lysine (CEL) are the major antigenic AGE structures. Next to glucose, reactive di-carbonyl compounds such as methylglyoxal are major precursors in the formation of cellular and extracellular AGEs. Methylglyoxal reacts with lysine residues to form CEL. CEL concentration is increased in patients who have diabetes with complications. OxiSelect Nepsilon-(carboxyethyl) lysine (CEL) ELISA Kit provides rapid detection and quantitation of CEL protein adducts. The quantity of CEL adduct in protein samples is determined by comparing its absorbance with that of a known CEL-BSA standard curve. Each kit provides sufficient reagents to perform up to 96 assays, including standard curve and unknown protein samples.
Product Categories/Family for OxiSelect Nepsilon-(carboxyethyl) lysine (CEL) elisa kit	Oxidative Stress/Damage; Protein Oxidation/Nitration; Advanced Glycation End Products; CEL (N-epsilon-(Carboxyethyl) Lysine) Assays and Reagents; CEL Competitive ELISA
References	- Monnier, V., and Cerami, A. (1981) Science 211, 491-493. - Ahmed M.U., Thorpe S.R., Baynes J.W (1986) J. Biol. Chem. 261, 4889-4894. - Reddy S., Bichler J., Wells-Knecht K.J., Thorpe S.R., Baynes J.W (1995) Biochemistry 34, 10872-10878. - Dunn, J. A., Patrick, J. S., Thorpe, S. R., and Baynes, J. W. (1989) Biochemistry 28, 9464-9468. - Ahmed, M. U., Brinkmann Frye, E., Degenhardt, T. P., Thorpe, S. R., and Baynes, J. W. (1997) Biochem. J. 324, 565-570. - Sell, D. R., and Monnier, V. M. (1989) J. Biol. Chem. 264, 21597-21602. - Onorato, J., Jenkins, A., Thorpe, S., and Baynes, J. (2000) J. Biol. Chem. 275, 21177-21184. - Boehm BO, Schilling S, Rosinger S, Lang GE, Lang GK, Kientsch-Engel P, Stahl P (2004) Diabetologia 47, 1376-1379. - Koito W, Araki T, Horiuchi S, Nagai R (2004) J. Biochem. 136, 831-837. - Nagai R., Fujiwara Y., Mera K., Yamagata K., Sakashita N., Takeya M. (2008) J. Immunol. Methods 332, 112-120. - Morgan, P. E. et al. (2014). Perturbation of human coronary artery endothelial cell redox state and NADPH generation by methylglyoxal. PLoS One. 9:e86564.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
 Online datasheet: <https://stage.aaabiotech.com/elisa-kits/oxiselect-nepsilon-carboxyethyl-lysine-cel/44617>