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Product Information

Anti-Lysyl Oxidase
produced in rabbit, affinity isolated antibody

Product Number **L4794**

Product Description

Anti-Lysyl Oxidase is produced in rabbit using as immunogen a synthetic peptide corresponding to a fragment of human lysyl oxidase (LOX) (GeneID 4015), conjugated to KLH. The corresponding sequence is highly conserved (87% identity) in mouse LOX and (81% identity) in rat LOX. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Lysyl Oxidase specifically recognizes human lysyl oxidase (LOX). The antibody may be used for immunoblotting (~50 kDa). Detection of the LOX band by immunoblotting is specifically inhibited by the LOX immunizing peptide.

LOX is a copper-dependent amine oxidase that controls the cross-linking of collagen and elastin, an essential step required in the biogenesis of fibrillar extracellular matrix.[1, 2] In this process LOX catalyzes the oxidation of a peptidyl lysine and hydroxylysine side chains into aldehydes. An additional four novel LOX-like proteins, LOXL1-4, have been identified as structurally related to LOX.[1-3] LOX is generated as a 50 kDa glycosylated pro-enzyme that is proteolytically processed by procollagen C proteinase (PCP) to a mature 32 kDa form. LOX has many intracellular functions including the regulation of cellular differentiation, cell migration and gene transcription.[1,2] Altered LOX expression and activity has been linked to skin aging and senescence. Decreased LOX expression and activity have been associated with severe connective tissue disorders. Increases in LOX expression contribute to the development of fibrotic diseases that involve connective tissue remodeling, such as atherosclerosis and scleroderma. In addition, LOX plays an important role in cancer metastasis.[4, 5] LOX expression is up-regulated in metastatic breast cancer cells. It is induced by hypoxia-induced factor (HIF) and is associated with hypoxia in human breast and head and neck tumors, suggesting an essential role of LOX in hypoxia-induced metastasis.[6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1.5-3.0 μg/mL is recommended using HEK-293T cells expressing human LOX.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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