UOX
Recombinant Urate Oxidase

Catalog No.	CSI10709	**Quantity:**	100 µg
	CSI10710		0.5 mg
	CSI10711		1.0 mg

Alternate Names: Urate Oxidase, Uricase, Urate Oxygen, Oxidoreductase, UOX, UO

Description: Urate oxidase catalyzes the enzymatic oxidation (degrades) of uric acid into allantoin, an inactive and soluble metabolite, which is 5 to 10 fold more soluble than uric acid . Urate oxidase is an enzyme of the purine breakdown pathway that catalyses the oxidation of uric acid to allantoin. It is present in numerous diverse organisms, but not in higher primates including human. Hyperuricaemia is most commonly associated with gout and also occurs in mammals with malignancy, especially those with lymphoid malignancies due to rapid cell turnover and an increased rate of purine metabolism. Urate Oxidase is effective in the prevention and treatment of hyperuricaemia in mammals with malignancy and in those who have undergone transplantation. It appears to act rapidly, safely and induces a more dramatic decrease in plasma levels of uric acid.
Recombinant Urate Oxidase produced in *E. coli* is a tetrameric, non-glycosylated polypeptide chain containing 302 aa. The cDNA coding for urate oxidase was cloned from a strain of *Aspergillus flavus*. The monomer protein has no intra- or inter-disulfide bridges.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Gene ID: 7377

Source: *E. coli*

Molecular Mass: 34,247 Dalton

Formulation: Each 1.5 mg Urate Oxidase contains 5mg sucrose + 25mg glycine + 0.1mg Tween-80 + 13.6 mg $Na_2HPO_4 \cdot 12H_20$ and 0.33 mg $NaH_2PO_4 \cdot 2H_20$.

Purity: Greater than 96.0% as determined by RP-HPLC and SDS-PAGE.

Biological Activity: The specific activity was found to be 10 U/mg. One Unit oxidizes one micromole of uric acid per minute at 25°C, at pH 8.5.

Amino Acid Sequence: MSAVKAARYG KDNVRVYKVH KDEKTGVQTV YEMTVCVLLE GEIETSYTKA DNSVIVATDS IKNTIYITAK QNPVTPPELF GSILGTHFIE KYNHIHAAHV NIVCHRWTRM DIDGKPHPHS FIRDSEEKRN VQVDVVEGKG IDIKSSLSGL TVLKSTNSQF WGFLRDEYTT LKETWDRILS TDVDATWQWK NFSGLQEVRS HVPKFDATWA TAREVTLKTF AEDNSASVQA TMYKMAEQIL ARQQLIETVE YSLPNKHYFE IDLSWHKGLQ NTGKNAEVFA PQSDPNGLIK CTVGRSSLKS KL.

Reconstitution: We highly recommend reconstituting the lyophilized Urate Oxidase in 50 mM borate buffer + 0.001% Triton X-100 + 1.0 mM EDTA, pH 8.5, for activity assay.

Storage & Stability: Lyophilized Urate Oxidase although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution, the protein should be stored at 2-4° C between 2-7 days and for future use below -18°C. **Please prevent freeze-thaw cycles**

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