

Recombinant Human Catalase/CAT Protein (His Tag)



Catalog Number:PKSH030909

Note: Centrifuge before opening to ensure complete recovery of vial contents.

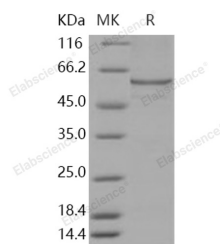
Description

Synonyms	MGC138422;MGC138424
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Ala 2-Leu 527
Accession	P04040
Calculated Molecular Weight	61.9 kDa
Observed molecular weight	60 kDa
Tag	N-His

Properties

Purity	> 80 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% glycerol Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

Catalase is a ubiquitously expressed enzyme that catalyzes the decomposition of hydrogen peroxide to water and oxygen. It is a tetramer of four polypeptides chains containing four porphyrin heme groups that allow the enzyme to react with the hydrogen peroxide. The optimum PH of human catalase is approximately 7 and the optimum temperature is at 37 degree. Both the PH optimum and temperature for other catalases varies depending on the species. Catalase can be inhibited by a flux of O₂- generated in situ by the aerobic xanthine oxidase reaction. This inhibition of catalase by O₂- provides the basis for a synergism between superoxide dismutase and catalase. Such synergisms have been observed in vitro and may be significant in vivo. Catalase is used in the food industry for removing hydrogen peroxide from milk prior to cheese production. Another use is in food wrappers where it prevents food from oxidizing. Catalase is also used in the textile

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industry; removing hydrogen peroxide from fabrics to make sure the material is peroxide-free.

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