



Recombinant Protein Technical Manual
Recombinant Human Catalase/CAT Protein (His Tag)
RPES3751

Product Data:

Product SKU: RPES3751

Size: 20µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: P04040

Protein Information:

Molecular Mass: 61.9 kDa

AP Molecular Mass: 60 kDa

Tag: N-His

Bio-activity:

Purity: > 80 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: 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% gly

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: MGC138422;MGC138424

Immunogen Information:

Sequence: Ala 2-Leu 527

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