

## Product datasheet for **AR50448PU-N**

### Catalase (1-527, His-tag) Human Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Catalase (1-527, His-tag) human recombinant protein, 0.5 mg
Species:	Human
Expression Host:	E. coli
Tag:	His-tag
Predicted MW:	61.9 kDa
Concentration:	lot specific
Purity:	>90% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 0.15M NaCl, 10% glycerol
Bioactivity:	Specific: >30,000 units/mg. One unit will decompose 1.0 umole of H <sub>2</sub> O <sub>2</sub> per minute at pH 8.0 at 25°C. (Activity assay see "Protocols").
Preparation:	Liquid purified protein
Applications:	Protocol: <b>Activity assay:</b> 1. Prepare an assay buffer with the following concentrations: 50 mM Potassium Phosphate (pH 8.0) and 0.15 % H <sub>2</sub> O <sub>2</sub> . 2. Load 150ul assay buffer into each well. 3. Add 50ul of recombinant CAT protein with 0.25ug, 0.125ug to each well. 4. Record the decrease in A260nm for 5 minutes at 25°C using UV plate.
Protein Description:	Recombinant human CAT protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Storage:	Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	<a href="#">NP_001743</a>



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Locus ID: 847

Cytogenetics: 11p13

**Summary:** This gene encodes catalase, a key antioxidant enzyme in the bodies defense against oxidative stress. Catalase is a heme enzyme that is present in the peroxisome of nearly all aerobic cells. Catalase converts the reactive oxygen species hydrogen peroxide to water and oxygen and thereby mitigates the toxic effects of hydrogen peroxide. Oxidative stress is hypothesized to play a role in the development of many chronic or late-onset diseases such as diabetes, asthma, Alzheimer's disease, systemic lupus erythematosus, rheumatoid arthritis, and cancers. Polymorphisms in this gene have been associated with decreases in catalase activity but, to date, acatalasemia is the only disease known to be caused by this gene. [provided by RefSeq, Oct 2009]

**Protein Families:** Druggable Genome

**Protein Pathways:** Amyotrophic lateral sclerosis (ALS), Metabolic pathways, Methane metabolism, Tryptophan metabolism

### Product images:

