# Data Sheet (Cat.No.TMPH-00035)

## Polyphenol oxidase 2 Protein, Agaricus bisporus, Recombinant (His)

### General Information

Synonyms: Tyrosinase 2;Phenolase 2;PPO2;Cresolase 2;Polyphenol oxidase 2

Protein Construction: 1-378 aa

Species: Agaricus bisporus

Expression Host: Baculovirus Insect Cells

Accession: O42713

Molecular Weight: 44.7 kDa (predicted)

AA Sequence: MSLIATVGPTGGVKNRLNIVDFVKNEKFFTLYVRSLELLQAKEQHDYSSFFQLAGIHGLPFTEWAKERPSMNLY KAGYCTHGQVLFPTWHRTYLSVLEQILQGAAIEVAKKFTSNQTDWVQAAQDLRQPYWDWGFELMPPDEVIK NEEVNITNYDGKKISVKNPILRYHFHPIDPSFKPYGDFATWRTTVRNPDRNRREDIPGLIKKMRLEEGQIREKTY NMLKFNDAWERFSNHGISDDQHANSLESVHDDIHVMVGYGKIEGHMDHPFFAAFDPIFWLHHTNVDRLLSL WKAINPDVWVTSGRNRDGTMGIAPNAQINSETPLEPFYQSGDKVWTSASLADTARLGYSYPDFDKLVGGTK ELIRDAIDDLIDERYG

### QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 85% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

### Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

## Protein Background

Copper-containing oxidase that catalyzes both the o-hydroxylation of monophenols and the subsequent oxidation of the resulting o-diphenols into reactive o-quinones, which evolve spontaneously to produce intermediates, which associate in dark brown pigments. Involved in the initial step of melanin synthesis. Melanins constitute a mechanism of defense and resistance to stress such as UV radiations, free radicals, gamma rays, dehydratation and extreme temperatures, and contribute to the fungal cell-wall resistance against hydrolytic enzymes in avoiding cellular lysis. Fungal pigments are also involved in the formation and stability of spores.



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