TRP1 Protein, Human (HEK293, His)

Cat. No.:	HY-P73568
Synonyms:	5,6-dihydroxyindole-2-carboxylic acid oxidase; Catalase B; TRP-1; TYRP1; CAS2
Species:	Human
Source:	HEK293
Accession:	P17643 (Q25-R471)
Gene ID:	7306
Molecular Weight:	Approximately 60-75 kDa due to the glycosylation

PROPERTIES

AA Sequence	Q F P R Q C A T V E A L R S G M C C P D L S P V S G P G T D R C G S S S G R G R C E A V T A D S R P H S P Q Y P H D G R D D R E V W P L R F F N R T C H C N G N F S G H N C G T C R P G W R G A A C D Q R V L I V R R N L L D L S K E E K N H F V R A L D M A K R T T H P L F V I A T R R S E E I L G P D G N T P Q F E N I S I Y N Y F V W T H Y Y S V K K T F L G V G Q E S F G E V D F S H E G P A F L T W H R Y H L L R L E K D M Q E M L Q E P S F S L P Y W N F A T G K N V C D I C T D D L M G S R S N F D S T L I S P N S V F S Q W R V V C D S L E D Y D T L G T L C N S T E D G P I R R N P A G N V A R P M V Q R L P E P Q D V A Q C L E V G L F D T P P F Y S N S T N S F R N T V E G Y S D P T G K Y D P A V R S L H N L A H L F L N G T G G Q T H L S P N D P I F V L L H T F T D A V F D E W L R R Y N A D I S T F P L E N A P I G H N R Q Y N M V P F W P P V T N T E M F V T A P D N L G Y T Y E I Q W P S R
Biological Activity	Measured by its ability to catalyze the formation of dopachrome from L-dopa. The specific activity is 73.524 U/mg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TRP1 (Tyrosinase-related protein 1) plays a crucial role in melanin biosynthesis, as evidenced by its involvement in the oxidation of 5,6-dihydroxyindole-2-carboxylic acid (DHICA) into indole-5,6-quinone-2-carboxylic acid, particularly in the presence of bound Cu(2+) ions. Notably, this enzymatic activity is inhibited in the presence of Zn(2+). TRP1 is implicated in regulating the type of melanin synthesized, thus influencing pigmentation processes. Additionally, to a lesser extent, TRP1 exhibits hydroxylating activity on tyrosine, contributing to melanin production. The multifaceted functions of TRP1 underscore its significance in melanogenesis and highlight its potential role in determining the characteristics of melanin generated in the skin.

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