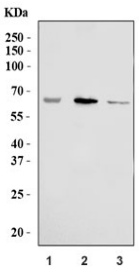
TYR Antibody / Tyrosinase (RQ6814)

Catalog No.	Formulation	Size
RQ6814	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P14679
Applications	Western blot: 1-2ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This TYR antibody is available for research use only.



TYR Antibody Human Cell WB. Western blot testing of human A375 (lane 1), A431 (lane 2), and HaCaT (lane 3) cell lysates using TYR antibody detected an immunoreactive band migrating at approximately 60-65 kDa, consistent with tyrosinase. TYR is extensively N-linked glycosylated during maturation within the endoplasmic reticulum and Golgi apparatus, resulting in multiple reported molecular forms that typically migrate between approximately 60 and 84 kDa depending on glycosylation status. This TYR Antibody, also called a Tyrosinase Antibody, is useful for investigating melanogenesis, pigment cell biology, melanosome function, and melanoma research.

Description

TYR Antibody / Tyrosinase Antibody recognizes tyrosinase (TYR), a copper-dependent oxidase that catalyzes the first and rate-limiting reactions of melanin biosynthesis. TYR converts tyrosine into L-DOPA and subsequently oxidizes L-DOPA to dopaquinone, initiating the pathway that produces eumelanin and pheomelanin pigments. As the central enzyme of melanogenesis, tyrosinase determines the quantity and composition of melanin synthesized by melanocytes, making it essential for normal pigmentation of the skin, hair, and eyes. Because TYR expression is largely restricted to

pigment-producing cells, it has become one of the most widely studied biomarkers of melanocyte differentiation and melanoma.

Tyrosinase is synthesized in the endoplasmic reticulum, undergoes extensive glycosylation and copper loading during maturation, and is transported through the Golgi apparatus to melanosomes where melanin production occurs. Proper folding and intracellular trafficking are critical for enzymatic activity, while defects in these processes reduce pigment synthesis. TYR functions together with TYRP1, TYRP2 (DCT), PMEL, and additional melanosomal proteins to regulate melanogenesis, melanosome maturation, and pigment transfer to surrounding keratinocytes.

Mutations in the TYR gene are the primary cause of oculocutaneous albinism type 1, an inherited disorder characterized by reduced or absent melanin production. TYR expression is also retained in most primary and metastatic melanomas, making it an important diagnostic biomarker and immunotherapy target. Beyond cancer, TYR continues to be widely investigated in dermatology, developmental biology, pigmentary disorders, and regenerative medicine because of its central role in melanocyte biology and pigmentation.

This rabbit polyclonal antibody was developed for sensitive detection of TYR in research applications. Its broad species reactivity makes it well suited for studies of melanogenesis, pigment cell biology, melanosome function, melanoma, and pigmentation disorders. A TYR Antibody is a valuable research tool for investigating tyrosinase, melanocyte differentiation, melanin biosynthesis, pigmentation disorders, and melanoma research.

For a broader overview of TYR biology, melanin biosynthesis, and melanocyte function, see our Tyrosinase Antibody / Melanin Biosynthesis Enzyme Antibody page.

Application Notes

Optimal dilution of the TYR antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids E130-K529) was used as the immunogen for the TYR antibody.

Storage

After reconstitution, the TYR antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

TYR antibody, Tyrosinase antibody, Monophenol Monooxygenase antibody, DOPA Oxidase antibody

Copyright © NSJ Bioreagents. All rights reserved.