Tyrosinase (T311): sc-20035

BACKGROUND

Tyrosinase (TYR), a type I membrane protein and copper-containing enzyme, is involved in the production of melanin, the primary pigment found in vertebrates. Melanin biosynthesis requires the enzymatic activity of TYR, which catalyzes the critical and rate-limiting step of tyrosine hydroxylation in the biosynthesis of melanin. Defects effecting TYR activity result in various forms of albinism. The TYR-related proteins, TRP1 and TRP2, are also specifically expressed in melanocytes, and they likewise contribute to the synthesis of melanin within the melanosomes. The TRPs, including TYR, all share a similar transmembrane region, contain two metal-binding regions and a cysteine-rich epidermal growth factor motif, and are localized in the melanosomal membrane. These proteins, however, have distinct catalytic activity, and they individually contribute to the biosynthesis of melanin biopolymers. The TRPs are believed to exist as a multi-enzyme complex, as these proteins form aggregates together, and the expression of TRP1 also helps stabilize TYR in melanocytes.

CHROMOSOMAL LOCATION

Genetic locus: TYR (human) mapping to 11q14.3, Tyr (mouse) mapping to 7 D3.

SOURCE

Tyrosinase (T311) is a mouse monoclonal antibody raised against recombinant Tyrosinase of human origin.

PRODUCT

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tyrosinase (T311) is available conjugated to agaroase (sc-20035 AC), 500 µg/0.25 ml agaroase in 1 ml, for IP; to HRP (sc-20035 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycerythrin (sc-20035 PE), fluorescein (sc-20035 FITC), Alexa Fluor® 488 (sc-20035 AF488) or Alexa Fluor® 647 (sc-20035 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

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APPLICATIONS

Tyrosinase (T311) is recommended for detection of Tyrosinase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).


Molecular Weight of Tyrosinase: 60 kDa.
Molecular Weight of glycosylated Tyrosinase: 70-84 kDa.
Positive Controls: Hep G2 cell lysate: sc-2227.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

Tyrosinase (T311): sc-20035. Western blot analysis of Tyrosinase expression in Hep G2 (A), Jurkat (B), A-431 (C) and A375 (D) whole cell lysates.

SELECT PRODUCT CITATIONS


RESEARCH USE

For research use only, not for use in diagnostic procedures.