TRP-1 Antibody / Tyrosinase-Related Protein-1 [clone SPM456] (V5508)

Catalog No.	Formulation	Size
V5508-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5508-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5508SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	SPM456
Purity	Protein A/G affinity
UniProt	P17643
Localization	Cytoplasm
Applications	Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-3ug/ml
Limitations	This TRP-1 antibody is available for research use only.

Description

TRP-1 antibody recognizes tyrosinase-related protein 1, encoded by the TYRP1 gene. TRP-1 is a melanocyte-specific protein involved in melanin biosynthesis, where it contributes to eumelanin production and pigment stabilization. It is localized to melanosomes and works in concert with tyrosinase and TRP-2 to regulate pigmentation. Because of its restricted expression and importance in melanocytic differentiation, TRP-1 antibody is a crucial reagent in melanoma research, pigment biology, and dermatology.

Structurally, TRP-1 is a transmembrane glycoprotein with an intraluminal catalytic domain that binds metal ions and contributes to redox chemistry during melanin synthesis. Although its enzymatic activity is less pronounced than tyrosinase, TRP-1 stabilizes melanin intermediates and protects against oxidative damage. Its expression in melanocytes and melanoma cells has made it a valuable marker for diagnostic pathology and immunotherapy development.

The TRP-1 antibody clone SPM456 provides reliable and specific recognition of this melanocytic protein. Clone SPM456 has been cited in peer-reviewed studies focused on melanoma immunology, pigment regulation, and melanocyte development. Recombinant-grade performance ensures consistent results across lots, reducing variability and supporting long-term research efforts. Its specificity for melanocytic lineages makes it useful in both basic and applied studies.

Research using clone SPM456 has demonstrated how TRP-1 expression distinguishes melanocytic tumors from other neoplasms, aiding in accurate classification. In addition, TRP-1 serves as a target in vaccine development and adoptive T-cell therapies, since immune responses directed against this protein can eliminate melanoma cells. Detection with this antibody supports translational approaches aimed at enhancing immune recognition of melanomas. Beyond oncology, TRP-1 detection has advanced understanding of pigmentation disorders and genetic conditions such as oculocutaneous albinism.

NSJ Bioreagents provides this TRP-1 antibody to support melanoma research, pigment biology, and translational immunology. Alternate terms include TYRP1 antibody, tyrosinase-related protein 1 antibody, gp75 antibody, melanocyte differentiation antigen antibody, and melanosomal protein antibody.

Application Notes

Optimal dilution of the TRP-1 antibody should be determined by the researcher.

Immunogen

SK-MEL-23 cells were used as the immunogen for the TRP-1 antibody.

Storage

Aliquot the TRP-1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.