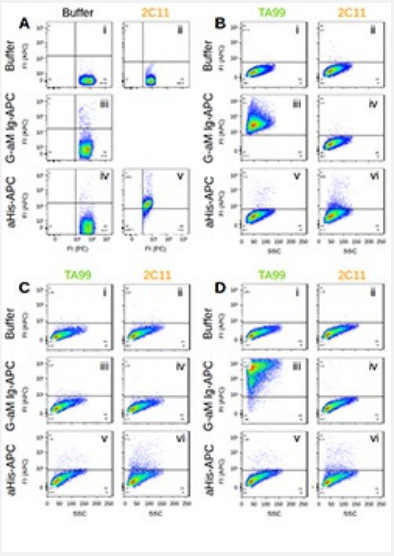
RecomAb™

TYRP1 recombinant monoclonal antibody, clone TA99

Catalog # RAB01188 Size 200 ug

Applications



Flow Cytometry

Mouse splenocytes (A), B16F10 murine melanoma cells (B), KPC3 pacreas carcinoma cells (C) and KPC3 cells transfected with the Trp1 gene (D) were fixed using 2% PFA, permeabilised using 0.5% Triton and were subject to a primary treatment of either buffer, mouse-IgG1 chimeric 2C11 or mouse-IgG1 chimeric TA99 (indicated above plots) before a secondary treatment with buffer, goat anti-mouse Ig-allophycocyanin (G-aM Ig-APC) or anti-HisTag-APC (aHis-APC) antibodies (indicated beside plots). In panel A, splenocytes were also stained with a commercially available anti-CD3 (2C11) antibody conjugated to phycoerythrin (PE); all cells (i-v) were CD3 and thus PE positive. In subpanel 'A v' an increase in APC fluorescence intensity (FI(APC)) indicates binding of aHis-APC to 2C11 bound to CD3 at the cell surface. Some Ig containing proteins expressed by the splenocytes may explain the increase in APC fluorescence in subpanel 'A iii'. In panel B an increase in FI(APC) in subpanel 'iii' indicates that TA99 binds to heavily expressed TRP1 at B16F10 cell surfaces and is then detectable using an G-aM Ig-APC antibody. Conversely, G-aM Ig-APC did not detect 2C11 at the cell surface, whereas a subset of cells with 2C11 bound to the surface were detectable using aHis-APC. Panel C shows that TRP1 is not detectable in KPC3 carcinoma cells ('Ci, iii, v') as expected, and that again, aHis-APC is able to detect a small subset of CD3 expressing cells ('C vi'). When transfected with the Trp1 gene, KPC3 cells then strongly express TRP1 and it becomes detectable ('D iii'). A small subset of CD3 positive cells was again detectable in Trp1 transfected KPC3 cells ('D vi'). All analyses were made using FACSCanto flow-cytometer.

Specification

Product Description	Mouse recombinant monoclonal antibody raised against human TRP-1.

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Antibody Species	Mouse
Immunogen	Original antibody is raised against 70-75 kDa pigmentation-associated glycoprotein in human melanoma cell lines.
Reactivity	Human
Specificity	Binds Tyrosinase-related protein-1 (TRP-1), a 70-75k enzyme located in melanocytes, which are specialized cells that produce a pigment called melanin, helping to stabilize tyrosinase, which is the enzyme responsible for the first step in melanin production and determine the shape of melanosomes, which are the structures in melanocytes where melanin is produced.
Form	Liquid
Preparation Method	Mammalian cell (HEK293) expression system
Purification	Protein A affinity purification
Isotype	IgG2a, Kappa
Recommend Usage	Flow cytometry The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS with 0.02% Proclin 300
Storage Instruction	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Applications

- Flow Cytometry

Mouse splenocytes (A), B16F10 murine melanoma cells (B), KPC3 pacreas carcinoma cells (C) and KPC3 cells transfected with the Trp1 gene (D) were fixed using 2% PFA, permeabilised using 0.5% Triton and were subject to a primary treatment of either buffer, mouse-IgG1 chimeric 2C11 or mouse-IgG1 chimeric TA99 (indicated above plots) before a secondary treatment with buffer, goat anti-mouse Ig-allophycocyanin (G-aM Ig-APC) or anti-HisTag-APC (aHis-APC) antibodies (indicated beside plots). In panel A, splenocytes were also stained with a commercially available anti-CD3 (2C11) antibody conjugated to phycoerythrin (PE); all cells (i-v) were CD3 and thus PE positive. In subpanel 'A v' an increase in APC fluorescence intensity (FI(APC)) indicates binding of aHis-APC to 2C11 bound to CD3 at the cell surface. Some Ig containing proteins expressed by the splenocytes may explain the increase in APC fluorescence in subpanel 'A iii'. In panel B an increase in FI(APC) in subpanel 'iii' indicates that TA99 binds to heavily expressed TRP1 at B16F10 cell surfaces and is then detectable using an G-aM Ig-APC antibody. Conversely, G-aM Ig-APC did not detect 2C11 at the cell surface, whereas a subset of cells with 2C11 bound to the surface were detectable using aHis-APC. Panel C shows that TRP1 is not detectable in KPC3 carcinoma cells ('Ci, iii, v') as expected, and that again, aHis-APC is able to detect a small subset of CD3 expressing cells ('C vi'). When transfected with the Trp1 gene, KPC3 cells then strongly express TRP1 and it becomes detectable ('D iii'). A small subset of CD3 positive cells was again detectable in Trp1 transfected KPC3 cells ('D vi'). All analyses were made using FACSCanto flow-cytometer.

Gene Info — TYRP1

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Entrez GeneID	7306
Protein Accession#	P17643
Gene Name	TYRP1
Gene Alias	CAS2, CATB, GP75, TRP, TYRP, b-PROTEIN
Gene Description	tyrosinase-related protein 1
Omim ID	115501 203290 278400
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a melanosomal enzyme that belongs to the tyrosinase family and plays an imp ortant role in the melanin biosynthetic pathway. Defects in this gene are the cause of rufous oculoc utaneous albinism and oculocutaneous albinism type III. [provided by RefSeq
Other Designations	associated with iris pigmentation

Pathway

- Melanogenesis
- Metabolic pathways
- Tyrosine metabolism

Disease

- Albinism
- Carcinoma
- Cardiovascular Diseases
- Celiac Disease
- Diabetes Mellitus
- Edema
- Genetic Predisposition to Disease
- Hermanski-Pudlak Syndrome
- Malignant melanoma

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- Melanoma
- Neoplasm Metastasis
- Skin Neoplasms

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