ImmunoTools IT-Box-139 Award 2012

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Phenotypic characterization and invasive features of LAM/TSC cells isolated from chylothorax

Tuberous sclerosis complex (TSC), an autosomal dominant disease characterized by hamartoma formation in various organs, is caused by mutations in *TSC1* e *TSC2* tumor suppressor genes, encoding hamartin and tuberin respectively. LAM is a rare disease characterized by widespread proliferation of abnormal smooth muscle-like cells, that leads to cystic lung destruction. LAM/TSC cells were isolated from chylous of a LAM/TSC patient. LAM/TSC cells bear a *TSC2* germline mutation, do not express tuberin for an epigenetic modification and survive in adherent and nonadherent condition. LAM/TSC cells have inflammatory activity and mesenchimal characteristics, resembling cancer cells. A metastatic process related to chemokines, cytokines and MMPs has been proposed in dissemination of LAM cells.

The ImmunoTools ITBox-139 would be used to screen LAM/TSC cells in adherent and non-adherent status to study if the expression of chemotactic markers (such as Il-6) and cell cycle differ depending from attachment condition. Adherent and nonadherent status might be expression of different functionality of the same cell. If successful this would emphasise the need for large antibody screening panels in LAM/TSC field to analyze features of the pathological cells. The use of Annexin V will be usefull to determine the viability of LAM/TSC cells in adherent and nonadherent status and CD11a, CD11b, CD29, CD44R, CD56 and CD95 to assess the adhesion phenotype of these cells and to understand their metastatic and invasion properties.

ImmunoTools IT-Box-139 for Emanuela Orpianesi includes 100 antibodies

FITC - conjugated anti-human CD1a, CD3, CD4, CD5, CD6, CD7, CD8, CD14, CD15, CD16, CD19, CD21, CD25, CD29, CD35, CD36, CD41a, CD42b, CD45, CD45RA, CD45RB, CD45RO, CD49d, CD53, CD57, CD61, CD63, CD80, CD86, HLA-DR, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE - conjugated anti-human CD3, CD4, CD8, CD11b, CD15, CD14, CD18, CD19, CD20, CD21, CD22, CD31, CD33, CD38, CD40, CD45, CD45RB, CD50, CD52, CD56, CD58, CD62p, CD72, CD95, CD105, CD147, CD177, CD235a, HLA-ABC, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE/Dy647 -tandem conjugated anti-human CD3, CD4, CD8, CD14, CD19, CD20, CD25, CD54

APC -conjugated anti-human CD2, CD3, CD4, CD8, CD10, CD11a, CD11c, CD14, CD16, CD27, CD37, CD42b, CD44, CD45, CD59, CD62L, CD69, CD71, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

DETAILS