ImmunoTools IT-Box-139 Award 2012

Brendan Ffrench

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Identification, Validation and Characterisation of Novel Ovarian Cancer Stem Cells.

Project Description:
Ovarian Cancer is the leading cause of death from gynaecological cancers. In 70 – 80% of cases the patient responds well to first line therapy. However, relapse occurs in 80 % of cases. Such relapse is usually refractory to therapy and has a poor outcome. Therapeutically targeting ovarian cancer stem cells (CSCs) has the potential to remove the malignant potential form tumours. Such a treatment should be less susceptible to relapse and metastasis.

Flow cytometry is used to identify and isolate putative ovarian CSCs. Six putative ovarian CSC markers used in this study. Sub-populations of cells expressing one or more of these markers are isolated as putative CSCs. Putative CSCs are validated as true CSCs, using an *in vitro* asymmetric division assay and an *in vivo* using a xenograft mouse tumourgenicity assay. Validated CSCs are characterised at a molecular level using microarrays, and at a phenotypic level using Chemoresistance, Hypoxia Resistance and *in vitro* Metastatic Potential Assays.

Intended use of ImunnoTools IT-Box-139:
Results to date have shown, that there are further sub-populations within our isolated CSC populations. However, we have no known markers for these new sub-populations. They can only be identified through their 'behaviours' in tissue culture assays. The ImmunoTools IT-Box-139 would be used to screen the isolated CSC populations to try and further map the CSC sub-populations to molecular markers. If successful this would emphasise the need for large antibody screening panels such as the ImmunoTools IT-Box-139, in the CSC field.

ImmunoTools IT-Box-139 for Brendan Ffrench include 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