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Monoclonal antibodies against human MS4A4A

Technology ID# 345.3

Background

University of Calgary researcher Dr. Julie Deans has recently produced three monoclonal antibodies (mouse IgG1) against human MS4A4A. MS4A4A is a member of the MS4A family, expressed exclusively in monocytes and M2 macrophages. Importantly, MS4A4A has been shown to be overexpressed in multiple myeloma, suggesting a potential role as a biomarker and/or therapeutic target in these diseases.

The anti-MS4A4A antibodies generated by Dr. Deans could be valuable for both pre-clinical and clinical research applications. These particular antibodies were generated against extracellular epitopes, have no observed cross-reactivity, and have been used successfully for flow cytometry and immunoprecipitation. Dr. Deans is a leader in the field of immunological research, and has extensively characterized these antibodies in her work.

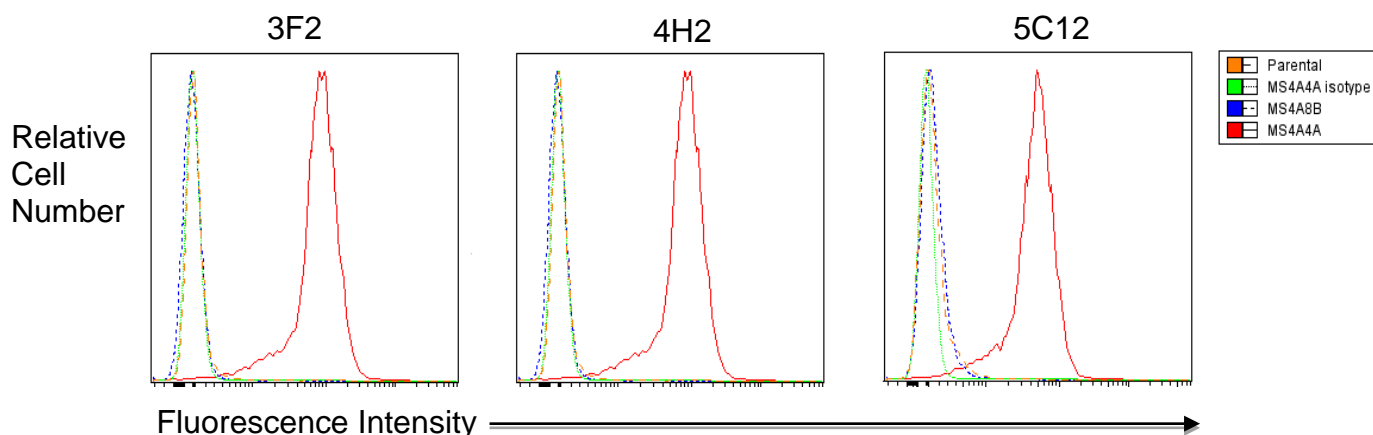


Figure 1: Specificity of MS4A4A antibodies (5C12, 4H2, 3F2) was evaluated by flow cytometry (anti-MS4A4A in red; controls in blue, green & orange) in BJAB-MS4A4A-HA cells.

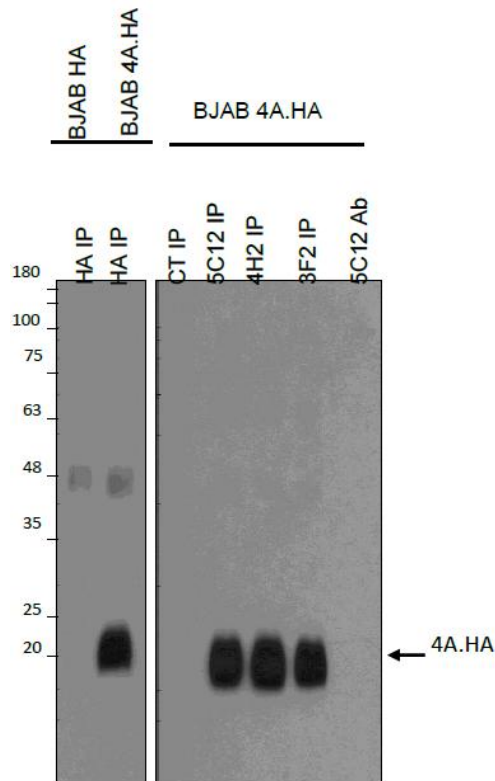


Figure 2: Specificity of MS4A4A antibodies (5C12, 4H2, 3F2) was evaluated by immunoprecipitation from BJA-B-MS4A4A-HA cells with the antibodies indicated (left panel) and immunoblotting using anti-HA (right panel).

Areas of Application

- Inflammation and Immunology
- Oncology: multiple myeloma

Competitive Advantages

- Extremely specific
- Well characterized
- Known applications (IP, FC)
- Binds to extracellular domain
- No need to permeabilize cells