Anti-CD27 [RM27-3E5] Bulk Size Ab00895-2.3-BT

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric mouse antibody was made using the variable domain sequences of the original Rat IgG2a format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Mouse IgG2a, Fc Silent™, Kappa
Clone Number: RM27-3E5
Alternative Name(s) of Target: TNFRS7; CD27 antigen; CD27L receptor; T-cell activation antigen CD27; Tumor necrosis factor receptor superfamily member 7
UniProt Accession Number of Target Protein: P41272
Published Application(s): IP, Neutralisation, FC
Published Species Reactivity: Mouse
Immunogen: This antibody was raised by immunising mouse with mouse CD27-human IgG1 Fc fusion protein. Isolated popliteal lymph node cells were then fused with P3U1 myeloma cells to produce stable hybridomas.
Specificity: This antibody is specific for the extracellular domain of murine CD27, a TNF-receptor superfamily member.
Application Notes: This antibody recognises murine CD27, as confirmed by flow-cytometry and immunoprecipitation analysis (Sakanishi & Yagita, 2010), a member of the TNF-receptor superfamily. The interaction between CD27 and its ligand CD70, which is recognised by anti-CD70 antibody TAN 1-7 (Ab00816), is crucial to regulation of the survival and differentiation of T cells, B cells and NK cells. As a result, RM27-3E5 modulates multiple immune cell types. The original rat IgG2a version of RM27-3E5 did not deplete T cells, NKT or NK cells, but does enhance the proliferation of anti-CD3-stimulated splenic T cells (Sakanishi & Yagita, 2010). In murine models of melanoma, it promotes the persistence of tumour-specific CD8+ T cells within tumours, and reduces levels of PD-1 expression on CD8+ T cells (Roberts et al, 2010). Additionally, anti-CD27 reduces the proportion of FoxP3+ CD4+ T cells in tumours, and enhances the effector activity of IFNγ-secreting, tumour-infiltrating CD8+ T cells and NK cells (Roberts et al, 2010). Finally, anti-CD27 Ab treatment alters murine splenocyte cytokine production, significantly reducing IL-5 and IFN-γ synthesis, and increasing TNF-α production (Sumi et al, 2008). It also significantly suppresses total serum IgE levels, while significantly increasing IgG1 and IgG2a levels. These immune modulatory properties translate into potent anti-tumour effects in mice. Treatment of established murine melanoma

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with RM27-3E5 (rat IgG2a) resulted in a significant reduction in lung metastases and subcutaneous tumours, through an IFNγ-dependent mechanism mediated by CD8+ T cells and NK cells (Roberts et al, 2010). In murine models of T cell lymphoma, the tumour-specific CTL response induced by RM27-3E5 (rat IgG2a) promoted almost complete regression of tumours, regardless of CD27 expression on tumour cells (Sakanishi & Yagita, 2010). This antibody has been used to identify CD27-expressing cells through flow-cytometry (Koyanagi et al, 2012).

Antibody First Published in: Sumi et al CD27 and CD70 do not play a critical role in the development of experimental allergic conjunctivitis in mice Immunology Letters, Volume 119, Issues 1–2, 15 August 2008, Pages 91-96 PMID:18579220

Note on publication: Describes the original generation of this antibody.

Product Form

Size: 1 mg Purified antibody in bulk size.

Purification: Protein A affinity purified

Supplied In: PBS only.

Storage Recommendation: Store at 4ºC for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommed this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20ºC.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.

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