

## Anti-CD27 [RM27-3E5] Standard Size Ab00895-10.0

This chimeric human 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:** Human IgG1, 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 IFN $\gamma$ -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- $\gamma$  synthesis, and increasing TNF- $\alpha$  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 with RM27-3E5 (rat IgG2a) resulted in a significant reduction in lung metastases and subcutaneous tumours, through an IFN $\gamma$ -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:** 200 µg Purified antibody.

**Purification:** Protein A affinity purified

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**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.