Aeonian Biotech

Your choice for selective antibodies

Reccombinant Version of Classic Clone

Cat nr AE00323 **Product Datasheet**

Rat Recombinant Antibody, rMJ18 to:

mouse CD276, B7-H3

B7 homolog 3; B7H3; B7-H3; B7RP; B7RP-2; AU016588; 6030411F23Rik

Cellular localization	Surface of cell membrane
Official Symbol (Gene)	Cd276
GeneID	102657
SwissProt	Q8VE98
Confirmed Applications	FC, inhibition CD4+ T-cell proliferation, enhancement CD8+ T-cell tumour infiltration
Positive controls	carcinoma
Aeonian Rating©	90
Purification	By Protein A from bioreactor concentrate
Formulation ☐ ☐	1 mg IgG/ml in PBS with 0.02% Proclin 300
Amount	☐ 200ug ☐ 1000ug
Isotype	Rat IgG1, kappa, recombinant version of clone MJ18
Confirmed species reactivity	Mouse
Immunogen	The extracellular domain (aa 1–242) of mouse B7-H3 linked to the Fc portion of mouse IgG2a.
Epitope	The extracellular domain (aa 1–242)
Storage instructions	Avoid repeated freeze/thaw cycles. For long term storage, keep small aliquots at -20C or -80C and keep one aliquot at 4C for daily experimentations. Azide will preserve antibody at 4C for 6-12 months, when kept away from direct sun light.
Expiration	Integrity warranted for 24 months after purchase when handled and stored according to instructions, see below.
Warranty	This product is only warranted for the specifications as described in this product sheet and only when the product is handled and stored according to instructions. User should validate this antibody in the application and tissue/cell type as required, after confirmation of integrity upon receipt is obtained by reproducing the performance as described below. Should such confirmation not be attempted, any warranty is void. In case of non-conformance, user needs to contact us immediately for replacement or refund.
Liability	This product is for in vitro research use only. Any other applications, such as diagnostics or therapeutics, or in vivo experiments, and the validation of this product therein, are solely at the responsibility of the buyer/user.
Product performance	see next pages

Product data:

Immunoassays

Selectivity assessment in Flow Cytometry (FC):
The selectivity of the original clone MJ18 was confirmed by comparing transfectant L5178Y and P815 cell lines, each expressing a different member of the B7 protein family.
Nagashima O, Harada N, Usui Y, Yamazaki T, Yagita H, Okumura K, Takahashi K, Akiba H. B7-H3 contributes to the development of pathogenic Th2 cells in a murine model of asthma. J Immunol. 2008 Sep 15;181(6):4062-71. doi: 10.4049/jimmunol.181.6.4062. PMID: 18768862.

Biological activity

Inhibition CD4+ T cell proliferation:
The original clone MJ18 was successfully used to inhibit the OVA323–339-induced proliferation of CD4+ T cells in the presence of bone marrow dendritic cells.
Nagashima O, Harada N, Usui Y, Yamazaki T, Yagita H, Okumura K, Takahashi K, Akiba H. B7-H3 contributes to the development of pathogenic Th2 cells in a murine model of asthma. J Immunol. 2008 Sep 15;181(6):4062-71. doi: 10.4049/jimmunol.181.6.4062. PMID: 18768862.

Enhancement of CD8+ T cell infiltration into tumours:
The original clone MJ18 was successfully used to block B7-H3, thus enhancing CD8+ T cells infiltration into pancraatic tumours in mice.
Yamato I, Sho M, Nomi T, Akahori T, Shimada K, Hotta K, Kanehiro H, Konishi N, Yagita H, Nakajima Y. Clinical importance of B7-H3 expression in human pancreatic cancer. Br J Cancer. 2009 Nov 17;101(10):1709-16. doi: 10.1038/sj.bjc.6605375. PMID: 19844235.

MJ18-specific most recent literature:

Masemann D, Meissner R, Schied T, Lichty BD, Rapp UR, Wixler V, Ludwig S. Synergistic anti-tumor efficacy of oncolytic influenza viruses and B7-H3 immune- checkpoint inhibitors against IC-resistant lung cancers. Oncoimmunology. 2021 Feb 17;10(1):1885778. doi: 10.1080/2162402X.2021.1885778. PMID: 33643696.
Cheng N, Bei Y, Song Y, Zhang W, Xu L, Zhang W, Yang N, Bai X, Shu Y, Shen P. B7-H3 augments the pro-angiogenic function of tumor-associated macrophages and acts as a novel adjuvant target for triple-negative breast cancer therapy. Biochem Pharmacol. 2021 Jan;183:114298. doi: 10.1016/j.bcp.2020.114298. Epub 2020 Oct 22. PMID: 33153969.

Mao L, Fan TF, Wu L, Yu GT, Deng WW, Chen L, Bu LL, Ma SR, Liu B, Bian Y, Kulkarni AB, Zhang WF, Sun ZJ. Selective blockade of B7-H3 enhances antitumour immune activity by reducing immature myeloid cells in head and neck squamous cell carcinoma. J Cell Mol Med. 2017 Sep;21(9):2199-2210. doi: 10.1111/jcmm.13143. PMID: 28401653.