

Anti-SEB [6D3] Standard Size Ab02342-23.0

This chimeric rabbit antibody was made using the variable domain sequences of the original Mouse IgG1 format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Rabbit IgG, Kappa

Clone Number: 6D3

Alternative Name(s) of Target: Staphylococcal enterotoxin B; Enterotoxin type B; entB

UniProt Accession Number of Target Protein: P01552

Published Application(s): ELISA, WB, Inhibit, Block

Published Species Reactivity: Staphylococcus aureus

Immunogen: The original antibody was generated by immunizing BALB/c mice with full-length staphylococcal enterotoxin B (SEB).

Specificity: This antibody binds a conformational epitope near the C terminal end of the Staphylococcal enterotoxin B. It is suspected that residues 135-R and 186-Y were required for the interaction with this antibody.

Application Notes: This antibody in combination with 14G8 and 20B1 can be used to detect Staphylococcal enterotoxin B (SEB) in a sample using capture ELISA. This antibody is capable of detecting SEB in a western blot assay but not staphylococcal enterotoxin A (SEA) or toxic shock syndrome toxin 1 (TSST-1). 6D3 demonstrated comparable level of inhibition of SEB induced T cell-proliferation in human T-cells from a normal donor. 6D3 also caused inhibition of cytokine induction in treated T-cells as they produced less IFN-gamma and IL-2. It was reported that 6D3 alone did not provide any protection against SEB induced lethal shock (SEBILS) in BALB/c mice and HLA-DR3 transgenic mouse model. However, when used in combination with mAb 14G8 or 20B1 it showed better results (PMID: 21233204). In a study, it was reported that there is a superantigen-like motif, similar to Staphylococcal enterotoxin B (SEB), present near the S1/S2 cleavage site of SARS-CoV-2 Spike protein, which results in multisystem-inflammatory syndrome (MIS-C) observed in children and cytokine storm in severe COVID-19 patients. 6D3 can bind this viral motif, and in particular its PRRA insert, to inhibit infection by blocking the access of host cell proteases, TMPRSS2 or furin, to the cleavage site. Experiments conducted with live viruses showed that 6D3 indeed inhibited SARS CoV2 (COVID-19 virus) entry to the host cell. It is suggested that this antibody may be used in combination with other neutralizing Abs that target the RBD or other non-overlapping sites to increase the efficacy of mAbs in inhibiting SARS-CoV-2 cellular entry (PMID: 33269352).

Antibody First Published in: Varshney et al. Generation, characterization, and epitope mapping of

neutralizing and protective monoclonal antibodies against staphylococcal enterotoxin b-induced lethal shock. J Biol Chem. (2011); 286(11): 9737-9747. [PMID:21233204](#)

Note on publication: Describes the generation, characterization and epitope mapping 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.