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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-Manganese transport protein C [305-78-7] Standard Size Ab03221-23.0

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: 305-78-7

Alternative Name(s) of Target: MntC; ABC transporter substrate-binding protein; Manganese ABC transporter substrate-binding lipoprotein; Manganese ABC transporter substrate-binding protein; Manganese-binding lipoprotein mntA; Manganese-binding protein; Metal ABC transporter substrate-binding protein; Periplasmic solute binding protein

UniProt Accession Number of Target Protein: W8TNQ9

Published Application(s): crystallography, in vitro, in vivo, ITC, ELISA

Published Species Reactivity: Staphylococcus aureus, Staphylococcus epidermidis

Immunogen: The original antibody was generated by immunizing mice with purified recombinant MntC.

Specificity: The antibody binds to a conformational epitope on MntC located between K243 and E260. The epitope involves α -helix α 8, β -sheet β 8 and a short loop connecting these two structural elements. The antibody interferes with manganese binding to the protein. Staphylococcus aureus protein MntC is a metal-binding protein of the ABC-type transporter involved in the acquisition of Manganese (II) ions.

Application Notes: The antibody showed reduce *S. aureus* burden in an infant rat passive protection model and induced neutrophil respiratory burst activity against both *Staphylococcus aureus* and *Staphylococcus epidermidis* (Anderson et al., 2012; PMID: 22474033). The structure of the antibody in complex with MntC was determined. Epitope mapping was carried out using Hydrogen-Deuterium Exchange Mass Spectrometry, the results were further validated using X-ray crystallography, site-directed mutagenesis and functional studies. The binding of the antibody to MntC was tested using ITC and ELISA. ITC experiments showed that binding of the wild type MntC to the antibody was stoichiometric, the apparent K_d was 1.2 nM, and the binding enthalpy was -19.9 kcal/mol. The specificity of the antibody was confirmed by ELISA analysis, with K_d = 1.3 nM. (Gribenko et al., 2016; PMID: 27689696)

Antibody First Published in: Anderson et al. *Staphylococcus aureus* manganese transport protein C is a highly conserved cell surface protein that elicits protective immunity against *S. aureus* and *Staphylococcus epidermidis* *J Infect Dis.* 2012 Jun;205(11):1688-96.

[PMID:22474033](#)

Note on publication: The paper describes the generation and characterization of the 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.