



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## Anti-Manganese transport protein C [305-78-7] Bulk Size Ab03221-1.1-BT

**Isotype and Format:** Mouse IgG1, 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  $\alpha$ -helix  $\alpha$ 8,  $\beta$ -sheet  $\beta$ 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:**

1 mg Purified antibody in bulk size.

**Purification:** Protein A affinity purified

**Supplied In:** PBS only.

**Storage Recommendation:** Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommended this antibody be handled under sterile conditions. 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.