



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# Anti-DOTA (metal-bound) [2D12.5] Standard Size Ab03322-1.1

**Isotype and Format:** Mouse IgG1, Lambda

**Clone Number:** 2D12.5

**Alternative Name(s) of Target:** Tetraxetan; dodecane tetra acetic acid; CHEBI:61028; Yttrium(III) labeled DOTA; Y-DOTA; Yttrium-1 4 7 10-tetraazacyclododecanetetraacetic acid; metal-DOTA

**UniProt Accession Number of Target Protein:**

**Published Application(s):** radioimmunotherapy

**Published Species Reactivity:** Species independent

**Immunogen:** The original antibody was generated by immunizing BALB/c mice with KLH-21T-BAD-Y(III).

**Specificity:** This antibody binds DOTA (Tetraxetan) and also shows binding affinity for This antibody binds metal bound DOTA (Tetraxetan) and also shows binding affinity for Yttrium(III) labeled DOTA, (S) nitro benzyl-DOTA chelates and Janus-DOTA (a bivalent form of DOTA). DOTA is a chelating agent which can be labelled with radioactive yttrium ion and even conjugated with monoclonal antibodies for radioimmunotherapy.

**Application Notes:** The original mouse IgG1 antibody binds DOTA chelates of all the rare earths with approximately  $K_d \approx 10^{-8}$  M, making it useful for the capture of probe molecules with a variety of properties (PMID: 15546206). The original IgG1 version of this antibody was used in the pretargeting for radioimmunotherapy in BALB/c mice with KHJJ tumors (PMID: 7954426). In vivo clearance studies have demonstrated that 74-96% of 2D12.5 bound to metal chelates is present 24 hours after administration of the bound complex (US7528235). An engineered version of this antibody with a single cysteine residue at position 54, 55 or 56 of the heavy chain, a site proximal to the protein's binding site, enables formation of weakly electrophilic metal complexes of (S)-2-(4-acrylamidobenzyl)-DOTA (AABD) that may bind and form permanent linkages (PMID: 15546206; 15546207). The heavy chain G54C mutant had a small set of electrophilic ligands, differences in reactivity indicated that the substituents near the electrophilic atom can be important determinants of permanent binding (PMID: 15546207).

**Antibody First Published in:** Goodwin et al. Pharmacokinetics of pretargeted monoclonal antibody 2D12.5 and 88Y-Janus-2-(p-nitro benzyl)-1,4,7,10-tetraazacyclododecanetetraacetic acid (DOTA) in BALB/c mice with KHJJ mouse adenocarcinoma: a model for 90Y radioimmunotherapy. Cancer Res. 1994 Nov 15;54(22):5937-46. [PMID:7954426](#)

**Note on publication:** Describes the pretargeting and pharmacokinetics of antibody 2D12.5 and DOTA for radioimmunotherapy in mouse models.

## 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.