

Anti-NC174 [NC10.14] Bulk Size Ab03921-3.0-BT

Isotype and Format: Mouse IgG2b, Lambda

Clone Number: NC10.14

Alternative Name(s) of Target: N-(p-cyanophenyl)-N'-(diphenylmethyl)-N''-(carboxymethyl)guanidine; N-(P-CYANOPHENYL)-N'-DIPHENYLMETHYL-GUANIDINE-ACETIC ACID; N-(pcyanophenyl)-N'-(diphenylmethyl)guanidine acetic acid; Trisubstituted guanidine sweetener; TGS

UniProt Accession Number of Target Protein:

Published Application(s): CD, FPA, RIA, IF

Published Species Reactivity: Species independent

Immunogen: The original antibody was generated by murine hybridomas produced by traditional techniques; mice were immunized with TGS covalently conjugated to bovine serum albumin carrier protein through one of the phenyl rings in Freund's complete adjuvant.

Specificity: This antibody specifically binds the hapten NC174, a trisubstituted guanidinium sweetener.

Application Notes: Ligand-induced quenching of IgG NC10.14 was used to determine the dissociation constant of the NC10.14-NC174 complex via IF and Circular Dichroism (CD) Spectroscopy (Viswanathan et al., 1996; PMID: 8756519). This antibody was used to study the ligand specificity of the putative sweet taste receptor binding site. Furthermore, the Fab of this antibody was used to show that aromatic-aromatic contacts at the interdomain surfaces are essential in the origination of CD spectra for both the near- and far-UV region (Tetin et al., 1996; PMID: 8573581). This antibody was examined to determine molecular recognition specificities using 14 different sweetener analogs in a competitive radioimmunoassay (Anchin et al., 1997; PMID: 9587873). An scFv of the antibody was constructed, and its binding affinity to NC174 was tested and compared to the original antibody and the Fab using CD and RIA (Pledger et al., 1999; PMID: 10440997). The crystal structure of a Fab of the original antibody was determined, and its binding and interaction with NC174 were explored (Guddat et al., 2000; PMID: 10993728). This antibody was used to screen combinatorial libraries for sweet taste compounds by antibody-based fluorescence polarization assay (FPA) (Linthicum et al., 2001; PMID: 11472231).

Antibody First Published in: Anchin et al. Variable region sequence and characterization of monoclonal antibodies to a N,N',N''-trisubstituted guanidine high potency sweetener Mol Immunol. 1993 Nov; 30(16):1463-71. doi: 10.1016/0161-5890(93)90108-n [PMID:8232332](#)

Note on publication: The original publication explores the creation and characterization of a monoclonal antibodies library that targets a trisubstituted guanidinium sweetener.

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.