

Product Datasheet

4-amino Biphenyl DNA Antibody (4C11) - BSA Free NB100-415

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NB100-415**4-amino Biphenyl DNA Antibody (4C11) - BSA Free**

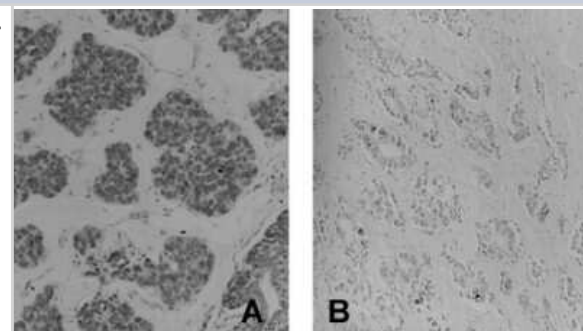
Product Information	
Unit Size	0.1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	4C11
Preservative	0.1% Sodium Azide
Purity	Unpurified
Buffer	Ascites

Product Description	
Description	Novus Biologicals Mouse 4-amino Biphenyl DNA Antibody (4C11) - BSA Free (NB100-415) is a monoclonal antibody validated for use in IHC, ELISA and ICC/IF. Anti-4-amino Biphenyl DNA Antibody: Cited in 3 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Species	Mouse, All Species
Reactivity Notes	Detects DNA from all species. Mouse reactivity reported in scientific literature (PMID: 12700401).
Immunogen	4-amino Biphenyl DNA

Product Application Details	
Applications	ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	ELISA 1:100-1:2000, Immunohistochemistry 1:50-1:100, Immunocytochemistry/ Immunofluorescence 1:50 1:100
Application Notes	This 4-amino Biphenyl DNA (4C11) antibody is useful for ELISA, Immunocytochemistry/Immunofluorescence and Immunohistochemistry.

Images

Immunohistochemistry: 4-amino Biphenyl DNA Antibody (4C11) [NB100-415] - Human breast tumor tissue with high (A) and low (B) adduct levels. Images courtesy of Dr. Regina Santella.



Publications

Brown, A et al. Robust DNA Repair May Lower Breast Cancer Risk. Journal of the National Cancer Institute. 2005-01-01

Faraglia, B et al. Evaluation of 4-aminobiphenyl-DNA adducts in human breast cancer: the influence of tobacco smoke. Carcinogenesis;24(4):719-25. 2003-04-01 [PMID: 12727801]

McQueen, CA et al. Neonatal ontogeny of murine arylamine N-acetyltransferases: implications for arylamine genotoxicity. Toxicol Sci;73(2):279-86. 2003-06-01 [PMID: 12700401] (IF/IHC, Mouse)

al-Atrash, J et al. Quantitative immunohistochemical analysis of 4-aminobiphenyl-DNA in cultured cells and mice: comparison to gas chromatography/mass spectroscopy analysis. Chem Res Toxicol;8(5):747-52. 1995-07-01 [PMID: 7548758]



Procedures

Serum protocol for 4-amino Biphenyl DNA Antibody (NB100-415)

4-amino Biphenyl DNA Antibody (4C11):

Competitive ELISA

I Coating of Plates

DNA coating: DNA is dissolved in PBS at appropriate concentration. 0.1 ml is added/well and plates put in 37 degrees Celsius incubator to evaporate overnight. Alternatively, plates can be coated with a 2-fold higher concentration of DNA for 2 hrs at 37 degrees Celsius then used. Column 1 is not coated. These well will not be used for the assay (no blocking, no antibody and no secondary antibody) but will have substrate added for blanking the reader. Plates are stored in the refrigerator.

Protein coating: Proteins are dissolved in PBS at the appropriate concentration. 0.1 ml is added/well and plates put in 37 degrees Celsius incubator to evaporate overnight. Column 1 is again not coated. Plates are stored in the refrigerator.

An alternate protein coating condition is to dissolve the protein in 0.1 M sodium carbonate buffer pH 9.6. 0.1 ml is added/well and the plates are refrigerated for several hours or overnight. They cannot be used after 3 days.
1 M solution 1.59 g Na₂CO₃ + 2.93 g NaHCO₃/100ml

II Assay

1. Label assay sheet and determine which rows are to be used. Row 1 (A-H) is not used; it will be used to blank the spectrophotometer. Avoid using the outer rows if possible (i.e.12A-H, H 1-12 and A 1-12).
2. Wash plate with wash buffer containing PBS-Tween and NaN₃ 3 x on each side (right side up and upside down). Shake out onto paper towel.
3. Add 0.2 ml/well of 1% FCS in wash buffer to block non specific binding. Solution of FCS should be made fresh.
4. Incubate 1 hr.
5. Preparation of inhibitor series (during incubation of plate with FCS). Calculate appropriate concentrations to give desired fmol/well=fmol/0.05 ml. Make serial dilutions by adding PBS or CT DNA to tubes followed by competitor.
6. Prepare antibody in 1% FCS washing buffer.
7. At end of incubation period, shake out solution from plate and tap onto paper towel to dry.
8. Add 0.05 ml of competitor to each well followed by 0.05 ml of diluted antibody. Be sure to run all controls including zero (no competitor), minus Ab (no antigen specific antibody but secondary antisera) and positive and negative controls.
9. Incubate for 90 min at 37 degrees Celsius.
10. Wash the plate with washing buffer 3 times on each side. Tap onto paper towels.
11. Secondary antisera - Use goat anti-mouse IgG-alkaline phosphatase for monoclonals and anti rabbit for polyclonals. Dilute as appropriate and add 0.1 ml/well.
12. Incubate for 90 min at 37 degrees Celsius.
13. Wash with wash buffer 3 x each side. Tap onto paper towel.
14. Wash plate 2 times with 0.01 M diethanolamine using the was bottle and covering the well completely each time. Tap onto paper towel. This step removes phosphate buffer which inhibits alkaline phosphatase activity.
15. Prepare the substrate - 2 tablets 95 mg/tablet) Sigma 104 in 10 ml 1 M diethanolamine, pH 8.6. Final

concentration 1 mg/ml. Avoid physical contact of skin with the tablets since skin contains alkaline phosphatase. Add 0.1 ml/well

16. Incubate at 37 degrees Celsius and read absorbance at 405 nm. The absorbance of the 0 fmol standard should be between 0.5 and 1. Values above 2 are not usable since the reader may not be linear in this range.

Rinse water - One liter of H₂O + 2 ml 10% NaN₃

Wash buffer - One liter of 1 x PBS + 500 ul Tween 20 + 2 ml 10% NaN₃

Blocking buffer - Wash buffer + 1% FCS





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Products Related to NB100-415

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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