

# Product Datasheet

## Alkaline Phosphatase, Tissue Non-Specific Antibody (TRA-2-49) - BSA Free NB600-540

Unit Size: 0.05 mg

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

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**NB600-540**

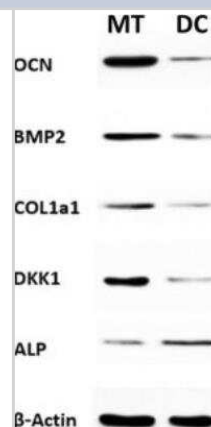
Alkaline Phosphatase, Tissue Non-Specific Antibody (TRA-2-49) - BSA Free

Product Information	
Unit Size	0.05 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	TRA-2-49
Preservative	0.1% Sodium Azide
Isotype	IgG1
Purity	Protein A purified
Buffer	20mM PBS (pH 7.6) and 0.25M NaCl
Product Description	
Host	Mouse
Gene ID	249
Gene Symbol	ALPL
Species	Human, Porcine, Feline, Rabbit
Reactivity Notes	Reactivity has been demonstrated with Liver/ Bone/Kidney isozyme of Alkaline Phosphatase (AP) from Humans, Higher Primates (Chimpanzee, Gorilla, Orangutan and Gibbon), New World Monkeys (Owl Monkey, Squirrel Monkey), Cat, Pig, Rabbit and Tiger.  No reactivity has been observed with Old World Monkeys (Baboon, Rhesus monkey, Mangabey, Mandrill, Celebese Black Ape, African Green Monkey), Bovine, Canine, Goat, Guinea Pig, Hamster, Mouse, Rat and Sheep. This antibody does not cross react with other isozymes of AP.
Specificity/Sensitivity	Undifferentiated human Embryonal Carcinoma (EC) and Embryonic Stem (ES) cells have been shown to express very high levels of Alkaline Phosphatase isozyme that is indistinguishable from the isozyme found in liver, bone and kidney. Expression levels of AP decrease following stem cell differentiation. This clone can be used in flow cytometry to determine the expression of the Liver / Bone / Kidney isozyme of Alkaline Phosphatase (AP), and hence monitor the differentiation status of EC and ES cells. This antibody does not cross react with other isozymes of AP.
Immunogen	2102Ep Human Embryonal Carcinoma Cells
Product Application Details	
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunoprecipitation
Recommended Dilutions	Western Blot, Flow Cytometry 5-20 ug/ml, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1:10-1:2000, Immunoprecipitation 1:10-1:500
Application Notes	Does not work on frozen sections. Use in WB reported in scientific literature (PMID: 30486863). Use in IHC reported in scientific literature (PMID:34394354).

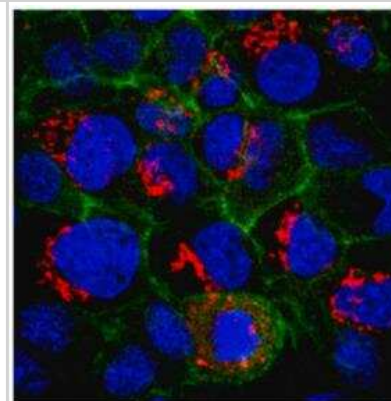


## Images

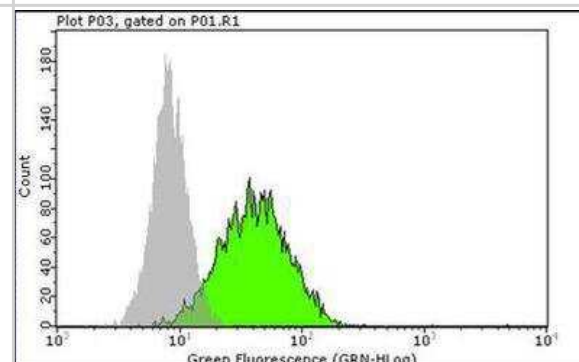
Western Blot: Alkaline Phosphatase, Tissue Non-Specific Antibody (TRA-2-49) [NB600-540] - Comparison on osteogenic-related proteins (OCN, BMP2, COL1a1, DDK1, ALP) for osteogenic micro-tissue and digested cells by Western blot. MT, osteogenic micro-tissue; DC, digested cells Image collected and cropped by CiteAb from the following publication (<https://stemcellres.biomedcentral.com/articles/10.1186/s13287-018-1064-1>) licensed under a CC-BY license.



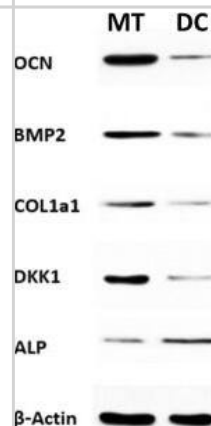
Immunocytochemistry/Immunofluorescence: Alkaline Phosphatase, Tissue Non-Specific Antibody (TRA-2-49) - BSA Free [NB600-540] - Confocal fluorescent analysis of A431 using anti-TRA-2-49 Mouse monoclonal antibody (Red). Actin filaments have been labeled with AlexaFluor(R) 488-Phalloidin (Green). Nucleus is stained with DAPI (Blue). Positive cytosol staining.



Flow Cytometry: Alkaline Phosphatase, Tissue Non-Specific Antibody (TRA-2-49) [NB600-540] - Analysis using anti-TRA-2-49. 2102Ep cells were stained with anti-TRA-2-49 antibody (Green) or isotype control antibody (grey).



Comparison on osteogenic-related proteins (OCN, BMP2, COL1a1, DDK1, ALP) for osteogenic micro-tissue and digested cells by Western blot. MT, osteogenic micro-tissue; DC, digested cells



## Publications

Kamadajaja DB, Abidin ZZ, Diana R Et al. In Vivo Analyses of Osteogenic Activity and Bone Regeneration Capacity of Demineralized Freeze-Dried Bovine Bone Xenograft: A Potential Candidate for Alveolar Bone Fillers International journal of dentistry 2021-08-03 [PMID: 34394354] (IF/IHC, Rabbit)

Wu D, Wang Z, Wang J et al. Development of a micro-tissue-mediated injectable bone tissue engineering strategy for large segmental bone defect treatment Stem Cell Res Ther 2018-11-28 [PMID: 30486863] (WB, Rabbit)

Chou BK, Gu H, Gao Y et al. A facile method to establish human induced pluripotent stem cells from adult blood cells under feeder-free and xeno-free culture conditions: a clinically compliant approach. Stem Cells Transl Med 2015-04-01 [PMID: 25742692] (FLOW, Human)





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### **Products Related to NB600-540**

NBL1-07487	Alkaline Phosphatase, Tissue Non-Specific Overexpression Lysate
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

### **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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