Product Datasheet

Cytokeratin, pan Antibody (AE-1/AE-3) - Azide and BSA Free

NBP2-33200

Unit Size: 0.1 mg

Store at -20 to -80C. Avoid freeze-thaw cycles.

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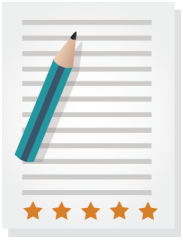


NBP2-33200

Cytokeratin, pan Antibody (AE-1/AE-3) - Azide and BSA Free

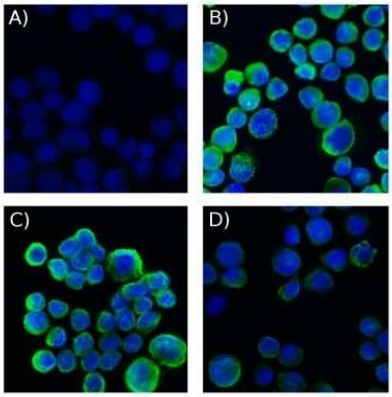
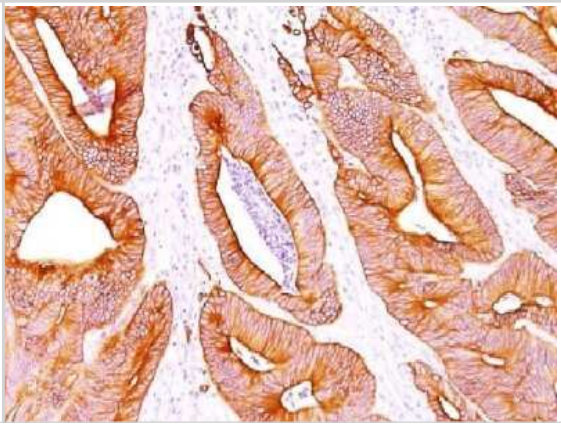
Product Information	
Unit Size	0.1 mg
Concentration	1.0 mg/ml
Storage	Store at -20 to -80C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	AE-1/AE-3
Preservative	No Preservative
Isotype	IgG1 Kappa/IgG1 Kappa
Purity	Protein A or G purified
Buffer	10 mM PBS

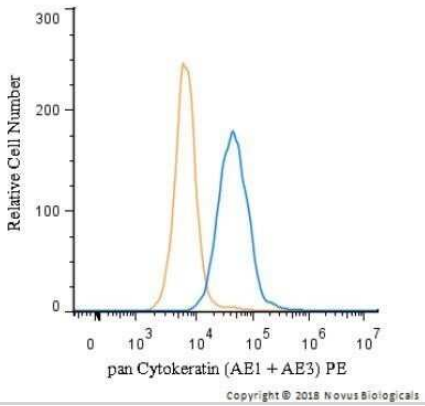
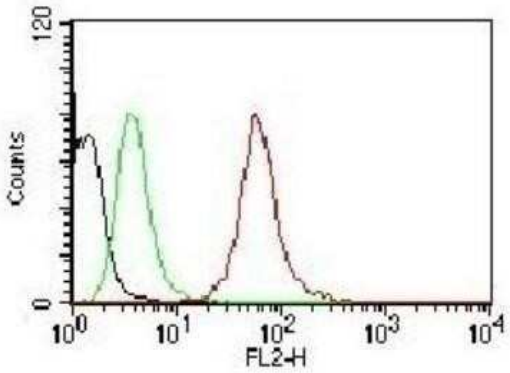
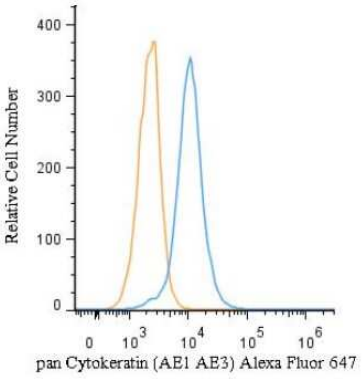
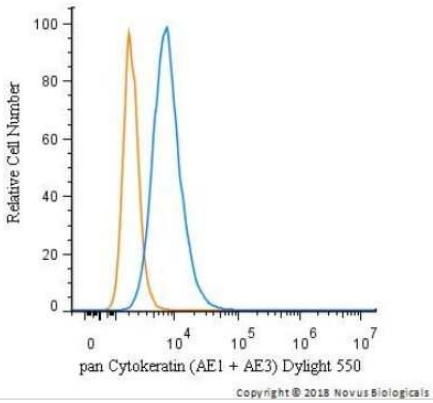
Product Description	
Description	1.0 mg/ml of antibody purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS WITHOUT BSA & azide. Also available at 200 ug/ml WITH BSA & azide (NBP2-29429). Antibody with azide - store at 2 to 8C. Antibody without azide - store at -20 to -80C.
Host	Mouse
Gene ID	3848
Gene Symbol	KRT1
Species	Human, Mouse, Rat, Bovine, Canine, Chicken, Monkey, Rabbit, Reptile, Zebrafish
Reactivity Notes	Reptile reactivity reported in scientific literature (PMID: 11351328). Zebrafish reactivity reported in scientific literature (PMID: 30970016).
Marker	Epithelial marker
Specificity/Sensitivity	Twenty human keratins are resolved with two-dimensional gel electrophoresis into acidic (pI 6.0) subfamilies. This antibody cocktail recognizes acidic (Type I or LMW) and basic (Type II or HMW) cytokeratins, which 67kDa (CK1); 64kDa (CK3); 59kDa (CK4); 58kDa (CK5); 56kDa (CK6); 52kDa (CK8); 56.5kDa (CK10); 50kDa (CK14); 50kDa (CK15); 48kDa (CK16); 40kDa (CK19). Many studies have shown the usefulness of keratins as markers in cancer research and tumor diagnosis. AE-1/AE-3 is a broad spectrum anti pan-cytokeratin antibody cocktail, which differentiates epithelial tumors from non-epithelial tumors e.g. squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer. It has been used to characterize the source of various neoplasms and to study the distribution of cytokeratin containing cells in epithelia during normal development and during the development of epithelial neoplasms. This antibody stains cytokeratins present in normal and abnormal human tissues and has shown high sensitivity in the recognition of epithelial cells and carcinomas.
Immunogen	Human epidermal keratin

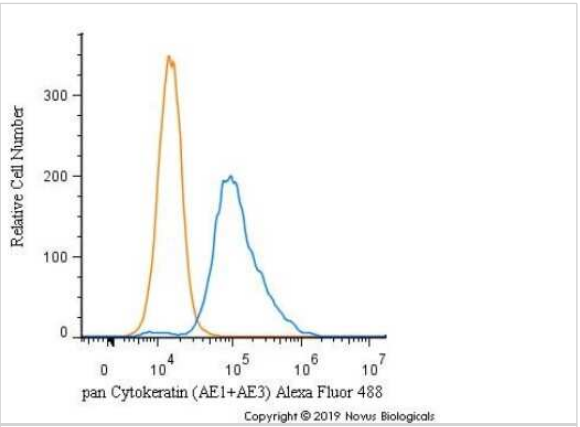
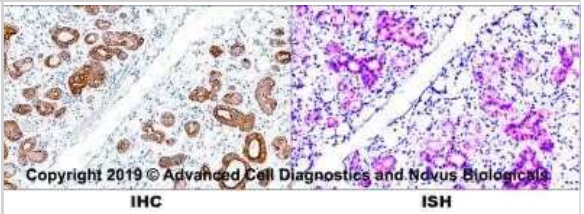
Product Application Details	
Applications	Western Blot, Flow Cytometry, Flow (Intracellular), Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, CyTOF-ready, Dual RNAscope ISH-IHC, Single Cell Western

Recommended Dilutions	Western Blot 0.5-1ug/ml, Flow Cytometry 0.1 - 1 ug/million cells, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence 1-2ug/ml, Immunohistochemistry-Paraffin 0.25 - 0.5 ug/ml, Immunohistochemistry-Frozen 0.5-1ug/mlimmunohistochemistry-Paraffin 0.5-1ug/ml, Flow (Intracellular), CyTOF-ready, Single Cell Western, Dual RNAscope ISH-IHC
Application Notes	Immunohistochemistry (Formalin-fixed): 0.25-0.5ug/ml for 30 min at RT. Staining of formalin-fixed tissues requires heating tissue sections in 10mM Tris with 1mM EDTA, pH 9.0, for 45 min at 95C followed by cooling at RT for 20 minutes. Optimal dilution for a specific application should be determined. Western Blot: 1-2ug/ml for 2 hours at RT. The staining pattern of the pan cytokeratin antibody cocktail may be different than that of either antibody separately. . This antibody cocktail recognizes acidic (Type I or LMW) and basic (Type II or HMW) cytokeratins, which 67 kDa (CK1); 64 kDa (CK3); 59 kDa (CK4); 58 kDa (CK5); 56 kDa (CK6); 52 kDa (CK8); 56.5 kDa (CK10); 50k Da (CK14); 50 kDa (CK15); 48 kDa (CK16); 40 kDa (CK19). The pan cytokeratin cocktail does not react with keratin 18, which is also expressed in carcinomas. As such, negative staining with NBP2-29429 in of itself may not be sufficient evidence to rule out the possibility of a carcinoma (Ordonez, 2013). For example, hepatocellular, adrenal cortical, clear cell renal and chromophobe renal cell carcinomas have been reported to be negative for the pan cytokeratin antibody. In this regard, the pan cytokeratin antibody can be used as part of a screening panel to more extensively define the tumor cell lineages. The pan cytokeratin antibody may cross-react with GFAP, leading to aberrant positive staining of glial tumors such as ependymoma, glioblastoma, or schwannoma (Ordonez, 2013). Use in Immunohistochemistry reported in scientific literature (PMID: 29169625).

Images

MCF-7 cells stained with Biotin conjugated version of pan Cytokeratin antibody and SAv-A488. A) SAv-A488 only at a dilution of 1:500, B) pan CK at a dilution of 1:200, C) pan CK at a dilution of 1:400, D) pan CK at a dilution of 1:800. Image from verified customer review.	
Analysis of Human Colon Carcinoma stained with pan Cytokeratin Monoclonal Antibody cocktail (AE-1/AE3).	

An intracellular stain was performed on HeLa cells with pan Cytokeratin Antibody (AE1 + AE3) NBP2-33200PE (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to phycoerythrin. Image from the PE version of this antibody.	
Analysis using Azide and BSA Free version of NBP2-29429. Black: Cells alone; Green: Isotype Control; Red: PE-labeled Pan-Cytokeratin Monoclonal Antibody (AE-1/AE-3).	
An intracellular stain was performed on HeLa cells with pan Cytokeratin Antibody (AE1 + AE3) NBP2-33200AF647 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 647.	
An intracellular stain was performed on HeLa cells with pan Cytokeratin Antibody (AE1 + AE3) NBP2-33200R (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 10 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Dylight 550.	

An intracellular stain was performed on HeLa cells with pan Cytokeratin [AE1 + AE3] Antibody NBP2-33200AF488 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to Alexa Fluor 488.	
Formalin-fixed paraffin-embedded tissue sections of human metastatic tonsil were probed for Pan Cytokeratin mRNA (ACD RNAScope probe, catalog # 310221; Fast Red chromogen, ACD catalog # 322500). Adjacent tissue section was processes for immunohistochemistry using mouse monoclonal (Novus catalog # NBP2-29429) at 0.3ug/mL for 1 hour at room temperature followed by incubation with the anti-mouse IgG VisUCyte HRP Polymer Antibody (Catalog # VC001) and DAB chromogen (yellow-brown). Tissue was counterstained with hematoxylin (blue).	

Publications

Gadwa J, Amann M, Bickett TE et al. Selective targeting of IL2R?? combined with radiotherapy triggers CD8- and NK-mediated immunity, abrogating metastasis in HNSCC Cell Reports Medicine 2023-08-15 [PMID: 37586327] (Flow Cytometry)

Md. Hafiz Uddin, Mohammad Najeeb Al□Hallak, Husain Yar Khan, Amro Aboukameel, Yiwei Li, Sahar F. Bannoura, Gregory Dyson, Seongho Kim, Yosef Mzannar, Ibrahim Azar, Tanya Odisho, Amr Mohamed, Yosef Landesman, Steve Kim, Rafic Beydoun, Ramzi M. Mohammad, Philip A. Philip, Anthony F. Shields, Asfar S. Azmi Molecular analysis of XPO1 inhibitor and gemcitabine–nab□paclitaxel combination in KPC pancreatic cancer mouse model Clinical and Translational Medicine 2023-12-22 [PMID: 38131168]

Adrian J. Rodrigues, Sophia B. Chernikova, Yuelong Wang, Thy T. H. Trinh, David E. Solow-Cordero, Ludmila Alexandrova, Kerriann M. Casey, Elizabeth Alli, Abhishek Aggarwal, Tyler Quill, Ashley K. Koegel, Brian J. Feldman, James M. Ford, Melanie Hayden-Gephart Repurposing mebendazole against triple-negative breast cancer CNS metastasis Journal of Neuro-Oncology 2024-04-02 [PMID: 38563850]

Casper W.F. van Eijck, Francisco X. Real, Núria Malats, Disha Vadgama, Thierry P.P. van den Bosch, Michail Doukas, Casper H.J. van Eijck, Dana A.M. Mustafa GATA6 identifies an immune-enriched phenotype linked to favorable outcomes in patients with pancreatic cancer undergoing upfront surgery Cell Reports Medicine 2024-05-10 [PMID: 38733987]

Schweizer L, Krishnan R, Shimizu A et al. Spatial proteo-transcriptomic profiling reveals the molecular landscape of borderline ovarian tumors and their invasive progression medRxiv : the preprint server for health sciences 2023-11-13 [PMID: 38014221] (IHC-P, Human)

Huang H, Li N, Liang Y et al. Multi-omics analyses reveal spatial heterogeneity in primary and metastatic oesophageal squamous cell carcinoma Clinical and translational medicine 2023-11-01 [PMID: 38009315] (IHC-P, Human)

Helgers LC, Keijzer NCH, van Hamme JL et al. Dengue virus infects human skin Langerhans cells via langerin for dissemination to dendritic cells The Journal of investigative dermatology 2023-11-16 [PMID: 37979773] (FLOW, Human)

Zhou AS, Tucker JB, Scribano CM et al. Diverse microtubule-targeted anticancer agents kill cells by inducing chromosome missegregation on multipolar spindles PLoS biology 2023-10-01 [PMID: 37883329] (IHC-P, Human)

Details:
Dilution 1:100; conjugated with AF647

Riedinger CJ, Esnakula A, Haight PJ et al. Characterization of mismatch-repair (MMR)/microsatellite instability (MSI)-discordant endometrial cancers Cancer 2023-09-26 [PMID: 37751191]

Xie Z, Niu L, Du K et al. Single-cell analysis reveals endothelial cell heterogeneity in colorectal cancer: Tip cells drive enhanced angiogenesis and reduced antigen presentation Research Square 2023-08-31 (IHC-P, Human)

Details:
1:200 dilution

Ying L, Zhang C, Reuben A et al. Immune-active tumor-adjacent tissues are associated with favorable prognosis in stage I lung squamous cell carcinoma iScience 2023-09-15 [PMID: 37694148]

Jim□nez-S□nchez D, L□pez-Janeiro □, Villalba-Esparza M et al. Weakly supervised deep learning to predict recurrence in low-grade endometrial cancer from multiplexed immunofluorescence images NPJ digital medicine 2023-03-23 [PMID: 36959234] (IHC-P, Human)

Details:
Dilution used in IHC-P 1:150

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MAB1455	Albumin Antibody (188835) [Unconjugated] - Serum

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