Alexa Fluor® 594 anti-human Cytokeratin 7 Antibody

Catalog# / Size	601603 / 25 µg
Clone	W16155A
Regulatory Status	RUO
Other Names	Keratin type II cytoskeletal 7, Cytokeratin-7, CK-7, Keratin-7, K7, Type-II keratin Kb7, Sarcolectin, SCL, Cytokeratin 7, Keratin 7
Isotype	Rat IgG2a, κ
Description	Keratin 7 (KRT7) belongs to type II keratin and is expressed in the epithelia lining the cavities of internal organs, gland ducts and blood vessels. The function of KRT7 is still not clear but it has been suggested involved in the translational regulation of the human papillomavirus type 16 E7 mRNA (HPV16 E7). In cancer, the expression of KRT7 is observed in many types of carcinoma and is associated with neoplasm progression. The diverse and unique expression pattern of KRT7 is often used as a diagnosis indicator in epithelial origin carcinoma. For example, aberrant KRT7 expression is observed in triple negative breast cancer. In bladder cancer, loss of KRT7 results in promoting proliferation of the bladder urothelium.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Human KRT7 peptide (446-462) conjugated to KLH.
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 594 under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**
Application	ICC - *Quality tested*
Recommended Usage	Each lot of this antibody is quality control tested by immunocytochemistry. For immunocytochemistry, a concentration range of 0.2 - 2.0 µg/ml (1:250-1:2500 dilution) is recommended. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor® 594 has an excitation maximum of 590 nm, and a maximum emission of 617 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Application Notes	This antibody does not react with mouse (in-house tested). Additional reported applications (for the relevant formats) include: spatial biology (IBEX)[1,2].
Application References **(PubMed link indicates BioLegend citation)**	1. Radtke AJ, *et al*. 2020. *Proc Natl Acad Sci USA*. 117:33455-33465. (SB) PubMed 2. Radtke AJ, *et al*. 2022. *Nat Protoc*. 17:378-401. (SB) PubMed
RRID	AB_2721379 (BioLegend Cat. No. 601603)

Antigen Details

Structure	Type II cytokeratin. 469 amino acids with a predicted molecular weight of 51 kD.
Distribution	Cytoplasm.
Function	KRT7 is a type II keratin, involved in the translational regulation of the human papillomavirus type 16 E7 mRNA.
Interaction	KRT7 interacts with EIF3S10, HPV16 E7, and GPER1.
Biology Area	Cell Biology, Cell Motility/Cytoskeleton/Structure, Neuroscience, Neuroscience Cell Markers
Molecular Family	Intermediate Filaments
Antigen References	1. Tajima Y, *et al*. 2017. *Sci Rep*. 7:40684. 2. Huang B, *et al*. 2016. *Oncogene*. 35:4927. 3. Szponar A, *et al*. 2012. *Virchows Arch*. 460:423. 4. Sano M, *et al*. 2010. *Int J Oncol*. 36:321.
Gene ID	3855

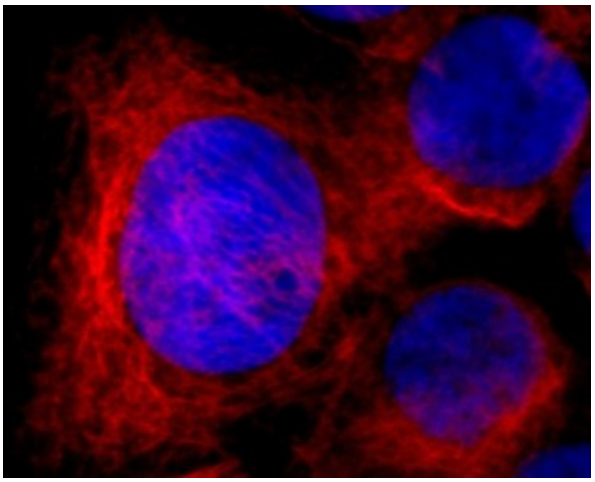
Related Protocols

Immunocytochemistry Staining Protocol

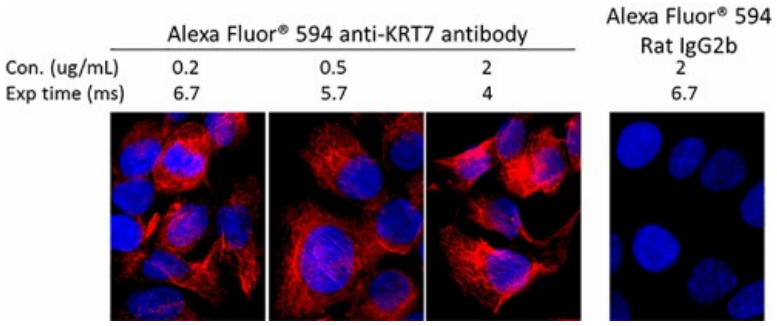
Other Formats

Purified anti-human Cytokeratin 7, Alexa Fluor® 594 anti-human Cytokeratin 7, Alexa Fluor® 488 anti-human Cytokeratin 7, Alexa Fluor® 647 anti-human Cytokeratin 7

Product Data



HaCaT cells were fixed with 4% paraformaldehyde (PFA) for 15 minutes, permeabilized with 0.5% Triton X-100 for 3 minutes, and blocked with 5% FBS for 60 minutes. Then the cells were intracellularly stained with 1: 1:1000 (0.5 µg/ml) diluted Alexa Fluor® 594 anti-Cytokeratin 7 antibody overnight at 4 degree. Nuclei were counterstained with DAPI (blue). The image was captured with a 60X objective.



HaCaT cells were fixed with 4% paraformaldehyde (PFA) for 15 minutes, permeabilized with 0.5% Triton X-100 for 3 minutes, and blocked with 5% FBS for 60 minutes. Then the cells were intracellularly stained with 1:250 diluted (2 µg/ml) Alexa Fluor® 594 Rat IgG2b, κ Isotype Ctrl Antibody (Cat no. 400661), and 1:250 (2 µg/ml), 1: 1:1000 (0.5 µg/ml) and 1:2500 (0.2 µg/ml) diluted Alexa Fluor® 594 anti-Cytokeratin 7 antibody overnight at 4 degree. Nuclei were counterstained with DAPI (blue). The image was captured with a 60X objective using KEYENCE BZ-X700 fluorescence microscope.

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