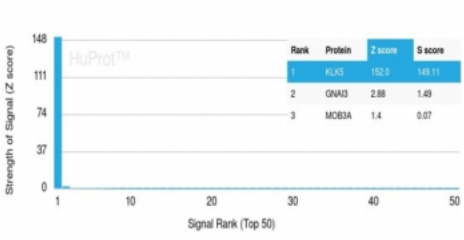
Kallikrein 5 Antibody KLK5/3855 / KLK5 Mouse Monoclonal Antibody [clone KLK5/3855] (V4638)

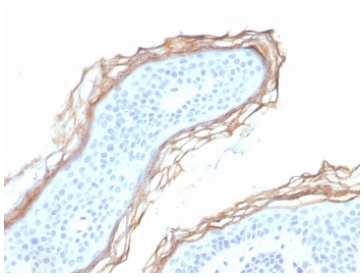
Catalog No.	Formulation	Size
V4638-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4638-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4638SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	KLK5/3855
Purity	Protein A/G affinity
UniProt	Q9Y337
Localization	Secreted
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Kallikrein 5 Antibody KLK5/3855 is available for research use only.



Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using Kallikrein 5 Antibody KLK5/3855. Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a mAb to its intended target. A mAb is considered to specific to its intended target, if the mAb has an S-score of at least 2.5. For example, if a mAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that mAb to protein X is equal to 29.



Kallikrein 5 Antibody KLK5/3855 Epidermal Keratinocyte IHC. Immunohistochemistry staining of FFPE human skin tissue with Kallikrein 5 antibody (clone KLK5/3855). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

Description

Kallikrein 5 Antibody KLK5/3855 / KLK5 Mouse Monoclonal Antibody recognizes kallikrein-related peptidase 5 (KLK5), a secreted serine protease involved in epidermal differentiation, desquamation, and maintenance of the skin barrier. KLK5 belongs to the tissue kallikrein family, which comprises 15 serine proteases encoded by genes clustered on human chromosome 19q13. Also known as stratum corneum tryptic enzyme (SCTE), KLK5 is particularly important in the proteolytic processes that regulate turnover of the outermost epidermal layers. Its expression is prominent in skin and has also been documented in mammary gland and testicular tissues.

KLK5 is synthesized as an inactive precursor that undergoes proteolytic cleavage to generate an active enzyme. Within the stratum corneum, KLK5 participates in the degradation of corneodesmosomal proteins that maintain adhesion between neighboring corneocytes. This activity facilitates the controlled shedding of terminally differentiated epidermal cells. KLK5 also contributes to a proteolytic cascade involving other epidermal kallikreins, including KLK7 and KLK14. Its enzymatic activity is regulated by epidermal pH and endogenous inhibitors, particularly lymphoepithelial Kazal-type inhibitor (LEKTI), encoded by the SPINK5 gene.

Disruption of KLK5 regulation can compromise epidermal barrier integrity and promote inflammatory signaling. In Netherton syndrome, inherited SPINK5 mutations impair LEKTI-mediated protease inhibition, resulting in excessive kallikrein activity, abnormal desquamation, and chronic skin inflammation. KLK5 can also activate protease-activated receptor 2 (PAR2), connecting extracellular proteolysis with keratinocyte signaling and inflammatory responses. Beyond dermatological disorders, altered KLK5 expression has been investigated in epithelial malignancies, where protease activity may influence extracellular matrix remodeling, cellular interactions, and tumor-associated processes.

The Kallikrein 5 Antibody provides a means of examining KLK5 protein distribution in epithelial tissues, particularly within epidermal compartments associated with barrier maintenance and differentiation. Clone KLK5/3855 was developed against a recombinant fragment within amino acids 1-200 of human KLK5. This KLK5 Mouse Monoclonal Antibody is supported by human skin immunohistochemistry and protein microarray validation data. NSJ Bioreagents offers this antibody for investigating KLK5 expression in the context of epidermal proteolysis, epithelial homeostasis, and inflammatory skin disease.

For highly specific detection of KLK5-associated epithelial barrier signaling pathways, see our Kallikrein 5 Antibody / Epidermal Barrier Protease Antibody page featuring clone KLK5/3841 with IHC and HuProt(TM) microarray specificity validation data.

Application Notes

Optimal dilution of the Kallikrein 5 Antibody KLK5/3855 should be determined by the researcher.

Immunogen

A recombinant fragment of human KLK5 protein (within amino acids 1-200) was used as the immunogen for the Kallikrein 5 Antibody KLK5/3855.

Storage

Aliquot the Kallikrein 5 Antibody KLK5/3855 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

KLK5 antibody, Kallikrein related peptidase 5 antibody, Kallikrein-like protein 2 antibody, KLK-L2 antibody, KLKL2 antibody, Stratum corneum tryptic enzyme antibody, SCTE antibody

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