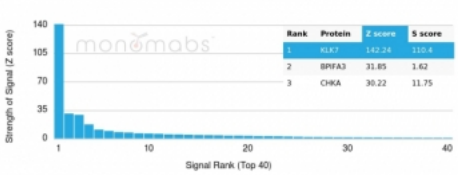
KLK7 Antibody - Protein Microarray Validated [clone KLK7/4691] (V4649)

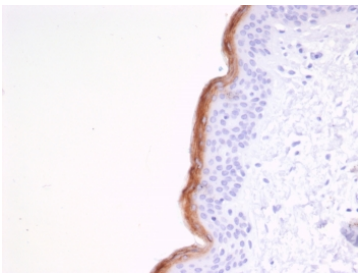
Catalog No.	Formulation	Size
V4649-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4649-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4649SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	KLK7/4691
Purity	Protein A/G affinity
UniProt	P49862
Localization	Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This KLK7 antibody is available for research use only.



KLK7 Antibody - Protein Microarray Validated clone KLK7/4691 specificity analysis of Kallikrein 7 / KLK7 using a HuProt(TM) protein array. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins was performed with KLK7 Antibody - Protein Microarray Validated (clone KLK7/4691). The antibody shows strong and selective binding to KLK7, demonstrating high specificity across the human proteome. Z-score represents the strength of signal generated when the monoclonal antibody, together with a fluorescently labeled anti-IgG secondary antibody, binds to a specific protein on the HuProt(TM) array. Z-scores are expressed in units of standard deviations above the mean signal across the array. When proteins are ranked by Z-score, the S-score represents the difference between consecutive Z-scores and reflects relative antibody specificity for the intended target. Antibodies with an S-score greater than 2.5 are considered highly specific, supporting selective recognition of KLK7 by clone KLK7/4691.



KLK7 Antibody - Protein Microarray Validated clone KLK7/4691 immunohistochemistry analysis of Kallikrein 7 / KLK7 in human skin tissue. FFPE human skin tissue was stained with KLK7 Antibody - Protein Microarray Validated (clone KLK7/4691) following heat induced epitope retrieval by boiling tissue sections in pH 9 Tris-EDTA buffer (10mM Tris, 1mM EDTA) for 20 minutes prior to cooling and staining. HRP-DAB brown chromogenic signal highlights strong staining along the outer epidermal layers of keratinocytes near the stratum corneum, consistent with the known localization of Kallikrein 7 (KLK7), also known as stratum corneum chymotryptic enzyme, in differentiated epidermal cells involved in skin barrier turnover and desquamation. Detection of KLK7 expression by immunohistochemistry supports studies of epidermal differentiation, keratinocyte biology, and dermatological disease research.

Description

Kallikrein related peptidase 7 (KLK7) is a secreted serine protease belonging to the human kallikrein family of trypsin-like proteases. The KLK7 gene encodes a proteolytic enzyme that plays an important role in epidermal homeostasis, particularly in the regulation of desquamation within the stratum corneum. KLK7 is commonly referred to as stratum corneum chymotryptic enzyme (SCCE) and functions in the controlled degradation of corneodesmosomal proteins that maintain adhesion between corneocytes. KLK7 Antibody - Protein Microarray Validated clone KLK7/4691 recognizes this epidermal protease and enables highly specific detection of KLK7 expression in studies examining skin biology and epithelial differentiation.

KLK7 Antibody - Protein Microarray Validated clone KLK7/4691 was evaluated using a large scale human protein microarray containing thousands of recombinant human proteins. This validation approach is designed to assess antibody specificity across a broad panel of potential off target proteins. Protein microarray validation demonstrates that the antibody selectively recognizes KLK7 with strong signal intensity while showing minimal cross reactivity with unrelated proteins on the array. This type of specificity testing provides strong evidence that the antibody targets KLK7 with high selectivity, supporting its use in studies requiring precise detection of the KLK7 protein.

KLK7 is highly expressed in differentiated keratinocytes of the epidermis and plays a central role in the physiological process of skin shedding. By cleaving key structural proteins within corneodesmosomes, KLK7 contributes to the controlled separation of corneocytes that allows normal turnover of the outermost layer of the skin. Dysregulation of KLK7 activity has been implicated in several dermatological conditions, including inflammatory skin diseases and disorders associated with abnormal epidermal barrier function.

KLK7 Antibody is useful for investigating the expression and regulation of this protease in epithelial tissues. Because KLK7 expression is strongly associated with epidermal differentiation, antibodies targeting this protein are frequently used in studies examining keratinocyte biology, epidermal maturation, and skin barrier regulation. Detection of KLK7 expression also supports investigations into the molecular mechanisms underlying dermatological disease and epithelial tissue remodeling.

KLK7 Antibody - Protein Microarray Validated clone KLK7/4691 provides researchers with a reagent that has undergone broad specificity screening using protein microarray technology. This validation strategy helps ensure selective recognition of KLK7 and supports studies requiring reliable detection of Kallikrein 7 expression in biological samples.

Application Notes

Optimal dilution of the KLK7 Antibody - Protein Microarray Validated clone KLK7/4691 should be determined by the researcher.

Immunogen

A recombinant fragment of human KLK7 protein (within amino acids 1-200) was used as the immunogen for the KLK7 antibody.

Storage

Aliquot the KLK7 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Kallikrein 7 antibody, Stratum corneum chymotryptic enzyme antibody, SCCE antibody, PRSS6 antibody, Human kallikrein 7 antibody