Monoclonal Antibodies AKH-1 & AKH-2 for Keratohyalin Detection

Biomaterial – Antibody

Biomaterial Description

AKH-1 and AKH-2 are monoclonal antibodies developed to target distinct components of human epidermal keratohyalin granules. AKH-1 specifically binds to profilaggrin and filaggrin, key proteins involved in keratin filament aggregation and epidermal differentiation. AKH-2 recognizes unique 150 and 300 kD cationic proteins that may represent processing intermediates or novel differentiation markers. Both antibodies exhibit strong immunohistochemical reactivity in the granular layer of normal and hyperkeratotic skin, and selectively stain well-differentiated keratinocytes in culture.

Applications

-Diagnostic marker for keratinization disorders including ichthyosis vulgaris, lamellar ichthyosis, and epidermolytic hyperkeratosis

-Differentiation assay for cultured keratinocytes and epithelial cell lines

-Histopathologic tool for distinguishing normal vs. abnormal epidermal architecture in skin biopsies and carcinomas

-Research reagent for studying filaggrin processing, keratohyalin granule composition, and epithelial differentiation

Advantages

-High specificity: AKH-1 targets profilaggrin/filaggrin; AKH-2 identifies distinct keratohyalin-associated proteins

-Sensitive detection: Reveals keratohyalin components not visible by routine H&E staining

-Differentiation-stage resolution: Enables precise mapping of epidermal maturation and pathology

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Category

Research Tools/Biological Materials/Antibody

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References

1. Dale, B.A., Gown, A.M., Fleckman, P., Kimball, J.R., Resing, K.A. (1987) , https://www.sciencedirect.com/science/article/pii/S0022202X87901977, https://www.sciencedirect.com/journal/journal-of-investigative-dermatology, 88, 306-313