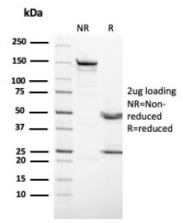
Keratin 3 Antibody KRT3/2542 / CK3 Monoclonal Antibody [clone KRT3/2542] (V8735)

Catalog No.	Formulation	Size
V8735-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8735-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8735SAF-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	KRT3/2542
Purity	Protein G affinity chromatography
UniProt	P12035
Localization	Cytoplasmic
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This Keratin 3 Antibody KRT3/2542 / CK3 Monoclonal Antibody is available for research use only.



Keratin 3 Antibody KRT3/2542 by SDS-PAGE. SDS-PAGE analysis of purified Keratin 3 Antibody KRT3/2542 under non-reducing (NR) and reducing (R) conditions, with 2 ug of antibody loaded per lane. The non-reducing lane shows a prominent band migrating at approximately 140-150 kDa, consistent with intact IgG. Under reducing conditions, distinct bands are observed at approximately 50 kDa and 25 kDa, corresponding to the immunoglobulin heavy and light chains, respectively. The electrophoretic profile is consistent with the expected composition of a purified mouse monoclonal antibody preparation.

Description

Keratin 3 Antibody KRT3/2542 recognizes keratin 3 (KRT3), a type II intermediate filament protein associated primarily with differentiated corneal epithelial cells. Also known as cytokeratin 3 or CK3, this approximately 64 kDa protein is encoded by the KRT3 gene on chromosome 12. KRT3 contributes to the mechanical stability of the corneal epithelium, where its intermediate filament network helps protect epithelial cells against physical stress. Expression of KRT3 increases during corneal epithelial maturation, making it an important marker of differentiated corneal epithelial identity and ocular surface integrity.

KRT3 typically forms heterodimers with keratin 12 (KRT12), a type I keratin characteristic of corneal epithelial cells. These heterodimers assemble into higher-order intermediate filament networks that maintain cellular architecture and help distribute mechanical forces throughout the epithelium. Mutations in KRT3 or KRT12 can cause Meesmann corneal dystrophy, an inherited disorder characterized by intraepithelial cysts, epithelial fragility, and recurrent ocular irritation. KRT3 expression is therefore investigated in corneal dystrophy, ocular surface injury, and experimental approaches to corneal epithelial regeneration.

Clone KRT3/2542 also recognizes keratin 76 (KRT76), another type II intermediate filament protein expressed in selected stratified epithelia. KRT76 has a distinct tissue distribution from KRT3 and is associated with epithelial differentiation in specialized regions, including certain oral and gastrointestinal epithelia. Because this antibody recognizes both proteins, positive staining should not automatically be interpreted as KRT3-specific expression. Tissue distribution, additional keratin markers, and complementary validation methods may be needed to distinguish KRT3 from KRT76 in experimental samples.

Keratin intermediate filaments are essential components of epithelial cytoskeletal organization, and their expression patterns provide information about cell differentiation and tissue identity. Changes in keratin expression have been investigated in epithelial injury, inflammatory disorders, and tumor development. NSJ Bioreagents offers mouse monoclonal clone KRT3/2542, developed using rabbit corneal epithelial keratin as the immunogen. Its recognition of KRT3 and KRT76 makes it useful for examining selected epithelial keratin populations while requiring appropriate interpretation of staining results. A Keratin 3 Antibody provides a research tool for studying epithelial differentiation, intermediate filament biology, and keratin-associated tissue organization.

Explore our protein microarray-validated Cytokeratin 3 Antibody KRT3/2130 for investigating corneal epithelial differentiation, keratin expression, and intermediate filament organization.

Application Notes

Optimal dilution of the Keratin 3 Antibody KRT3/2542 / CK3 Monoclonal Antibody should be determined by the researcher.

Immunogen

Rabbit corneal epithelial keratin was used as the immunogen for the Keratin 3 Antibody KRT3/2542.

Storage

Store the Keratin 3 Antibody KRT3/2542 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Cytokeratin 3 antibody, CK3 antibody, KRT3 antibody, Cytokeratin-3 antibody, Corneal Keratin antibody, Keratin Type II Cytoskeletal 3 antibody, Keratin 76 antibody

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