**BACKGROUND**

Cytokeratins comprise a diverse group of intermediate filament proteins (IFPs) that are expressed as pairs in both keratinized and non-keratinized epithelial tissue. Cytokeratins play a critical role in differentiation and tissue specialization and function to maintain the overall structural integrity of epithelial cells. Cytokeratins have been found to be useful markers of tissue differentiation which is directly applicable to the characterization of malignant tumors. For example, Cytokeratin 10 and 13 are expressed highly in a subset of squamous cell carcinomas while Cytokeratin 18 is expressed in a majority of adenocarcinomas and basal cell carcinomas. Cytokeratin 18 contains two major phosphorylation sites on Ser 33 and Ser 52. Phosphorylation of Ser 18 is essential for the association of Cytokeratin 18 with 14-3-3 proteins and is involved in keratin organization and distribution.

**CHROMOSOMAL LOCATION**

Genetic locus: KRT18 (human) mapping to 12q13.13; Krt18 (mouse) mapping to 9q13.2.

**SOURCE**

Cytokeratin 18 (RGE53) is a mouse monoclonal antibody raised against a cytoskeletal preparation of cells.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cytokeratin 18 (RGE53) is available conjugated to agarose (sc-32329 AC), 500 µg/0.25 ml agarose in 1 ml, for WB, IHC(P) and ELISA; to phycoerythrin (sc-32329 PE), fluorescein (sc-32329 AF546), Alexa Fluor® 594 (sc-32329 AF594) or Alexa Fluor® 647 (sc-32329 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-32329 AF680) or Alexa Fluor® 790 (sc-32329 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

Cytokeratin 18 (RGE53) is recommended for detection of Cytokeratin 18 of mouse, rat, human and bovine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunohistochemistry (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells); not recommended for paraffin-embedded sections.

Suitable for use as control antibody for Cytokeratin 18 siRNA (h): sc-35151, Cytokeratin 18 siRNA (m): sc-45406, Cytokeratin 18 shRNA Plasmid (h): sc-35151-SH, Cytokeratin 18 shRNA Plasmid (m): sc-45406-SH, Cytokeratin 18 shRNA (h) Lentiviral Particles: sc-35151-V and Cytokeratin 18 shRNA (m) Lentiviral Particles: sc-45406-V.

Molecular Weight of Cytokeratin 18: 45 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or SK-BR-3 cell lysate: sc-2218.

**STORE**

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

Cytokeratin 18 (RGE53): sc-32329. Near-infrared western blot analysis of Cytokeratin 18 expression in SK-BR-3 (A) and MCF7 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

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