BACKGROUND

The claudin superfamily consists of structurally related proteins that are important structural and functional components of tight junctions. Claudin-2, also known as CLDN2 or SP82, is a 230 amino acid multi-pass membrane protein that localizes to the cell junctions and belongs to the claudin superfamily. Able to form homopolymers of heteropolymers with other claudin family members, claudin-2 plays an essential role in mediating calcium-independent cell adhesion activity that is necessary for tight junction-specific obliteration of the intercellular space. Overexpression of claudin-2 is associated with a variety of diseases, including lung cancer, colorectal cancer, gastrointestinal carcinomas and inflammatory bowel disease, further affirming the importance of claudin-2 in cell adhesion. The gene encoding claudin-2 maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: CLDN2 (human) mapping to Xq22.3; Cldn2 (mouse) mapping to X F1.

SOURCE

Claudin-2 (3F1) is a mouse monoclonal antibody raised against amino acids 29-80 of claudin-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Claudin-2 (3F1) is recommended for detection of claudin-2 of mouse, rat and human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of claudin-2: 25 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting LuminoL Reagent: sc-2048.
2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA


SELECT PRODUCT CITATIONS


STORAGE

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

RESEARCH USE

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