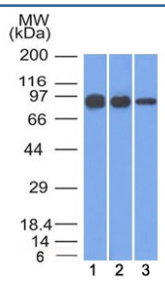
Beta-Catenin Antibody / CTNNB1 Cross-Study Consistency Antibody [clone 12F7] (V3209)

Catalog No.	Formulation	Size
V3209-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3209-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3209SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

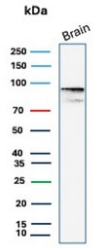
Citations (8)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	12F7
Purity	Protein G affinity chromatography
UniProt	P35222
Localization	Cell surface, cytoplasmic, cell junctions
Applications	Flow Cytometry : 0.5-1ug/10^6 cells Immunofluorescence : 1-2ug/ml Western Blot : 0.5-1ug/ml
Limitations	This Beta-Catenin Antibody / CTNNB1 Cross-Study Consistency Antibody is available for research use only.



Beta-Catenin Consistency Antibody Human Cell Line WB. Western blot analysis of 1) human A431, 2) A549, and 3) MCF7 cell lysates using Beta-Catenin Antibody (clone 12F7) detects a consistent band at approximately 90-95 kDa across all samples, aligning with the predicted molecular weight of Catenin beta-1 / CTNNB1 at ~85 kDa with a characteristic upward shift during SDS-PAGE. The uniform banding pattern across multiple epithelial and cancer cell lines supports reproducible detection of CTNNB1, consistent with phosphorylation-associated modulation of beta-catenin electrophoretic mobility.



Beta-Catenin Consistency Antibody Brain WB. Western blot analysis of human brain tissue lysate using Beta-Catenin Antibody (clone 12F7) detects a clear band at approximately 90-95 kDa, consistent with the predicted molecular weight of Catenin beta-1 / CTNNB1 at ~85 kDa with a characteristic upward shift during SDS-PAGE. This migration pattern aligns with phosphorylation-associated modulation of beta-catenin mobility and supports reproducible detection of CTNNB1 in neural tissue.

Description

Catenin beta-1 (CTNNB1) is a multifunctional protein that serves as a key regulator of cell adhesion and Wnt signaling, making it a widely studied target in both basic and translational research. The Beta-Catenin Antibody / CTNNB1 Cross-Study Consistency Antibody (clone 12F7) is associated with extensive use in the literature, supporting its role as a reliable reagent for generating reproducible data across independent experiments. CTNNB1 is encoded on chromosome 3p22.1 and belongs to the armadillo repeat protein family, characterized by multiple protein interaction domains that facilitate binding to cadherins, transcription factors, and regulatory complexes.

The Beta-Catenin Antibody / CTNNB1 Cross-Study Consistency Antibody, also referred to as CTNNB1 antibody and Catenin beta-1 antibody in the literature, recognizes a protein that functions in both structural and signaling contexts. At the plasma membrane, beta-catenin associates with E-cadherin to maintain adherens junction integrity and epithelial architecture. Through interaction with alpha-catenin, CTNNB1 links cell-cell adhesion complexes to the actin cytoskeleton, supporting tissue stability and organization.

In addition to its structural role, beta-catenin acts as a central effector of canonical Wnt signaling. Under basal conditions, CTNNB1 is phosphorylated by the destruction complex, which includes APC, AXIN, GSK3beta, and CK1, leading to ubiquitination and proteasomal degradation. Upon pathway activation, beta-catenin becomes stabilized and accumulates in the cytoplasm before translocating to the nucleus, where it interacts with TCF/LEF transcription factors to regulate gene expression. This tightly controlled regulation of protein stability and localization is critical for maintaining normal cellular function.

This Beta-Catenin Antibody / CTNNB1 Cross-Study Consistency Antibody is uniquely positioned for studies requiring reproducible detection of CTNNB1 across different experimental systems. The extensive publication record associated with clone 12F7 reflects its use in diverse research applications, enabling consistent interpretation of beta-catenin expression, localization, and signaling activity. Its performance supports comparison of results across studies, making it particularly useful for validation and replication of experimental findings.

Dysregulation of CTNNB1 is implicated in a wide range of cancers, including colorectal carcinoma, hepatocellular carcinoma, breast cancer, and melanoma, where altered protein stability leads to accumulation and aberrant signaling. Beta-catenin antibody detection is therefore frequently used to assess pathway activation, tumor progression, and cellular differentiation states. The use of a consistent and well-referenced antibody clone enhances confidence in these analyses and supports integration with existing literature.

The mouse monoclonal clone 12F7 provides stable and reproducible detection of CTNNB1, supporting research applications that require reliable performance across experiments and sample types. This antibody targets beta-catenin for studies focused on understanding CTNNB1 function in adhesion, signaling, and disease. Its consistent behavior across experimental conditions makes it a valuable tool for both discovery and confirmatory research.

This antibody complements our Beta-Catenin Antibody / CTNNB1 Antibody (clone CTNNB1/2030R) for broader analysis of CTNNB1 expression and localization.

Application Notes

Titration of the Beta-Catenin Antibody / CTNNB1 Cross-Study Consistency Antibody Clone 12F7 may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A recombinant fusion protein consisting of the N-terminal half of human beta-Catenin fused to maltose binding protein was used as the immunogen for the Beta Catenin antibody.

Storage

Store the Beta Catenin antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Beta-catenin consistency antibody, CTNNB1 reproducible antibody, Catenin beta-1 antibody clone 12F7, Beta catenin cross-study antibody, CTNNB1 standardized antibody