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Purified Mouse Anti-STIM1 Monoclonal Antibody

CLX395AP

Lot:

Size: 0.1 mg

Clone: CDN3H4

Isotype: Mouse IgG1

Specificity: The antibody CDN3H4 reacts with human and rodent STIM1, a 84 kDa essential and conserved regulator of store-operated Ca²⁺ channel function.

Immunogen: Synthesized peptide (C-terminal cytoplasmic part of STIM1).

Species Reactivity: Human, Mouse, Rat

Application: **Immunoprecipitation**
Western Blotting

Recommended dilution: 1 µg/ml

Positive control: RBL rat basophilic leukemia cell line

Sample preparation: Resuspend approx. 50 mil. cells in 1 ml cold Lysis buffer (1% laurylmaltoside in 20 mM Tris/Cl, 100 mM NaCl pH 8.2, 50 mM NaF including Protease inhibitor Cocktail). Incubate 60 min on ice. Centrifuge to remove cell debris. Mix lysate with non-reducing/reducing Laemmli SDS-PAGE sample buffer.

Application note: Both reducing and non-reducing conditions.

Immunohistochemistry (paraffin sections)

Recommended dilution: 5 µg/ml

Immunocytochemistry

Staining technique: methanol-aceton fixation

Positive control: HeLa human cervix carcinoma cell line

Purity: > 95% (by SDS-PAGE)

Purification: Purified from hybridoma culture supernatant by protein-A affinity chromatography.

Concentration: 1 mg/ml

Storage Buffer: Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4

Storage / Stability: Store at 2-8°C. Do not use after expiration date stamped on vial label. For long-term storage aliquot and store at -20°C. Avoid freeze/thaw cycles.

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Background:

STIM1 (stromal interacting molecule; also known as GOK) acts as a sensor of calcium depletion within the endoplasmic reticulum and transduces the signal to Orai1, the presumptive CRAC channel at the plasma membrane. Following decrease of luminal calcium concentration, STIM1 oligomerizes and induces Orai1 to enable entry of extracellular calcium into the cytoplasm. However, the precise mechanism of STIM1-Orai1 interaction has not been elucidated yet. Many questions also remain to be solved around STIM1 functional distribution. It turns out that STIM1 associates with growing ends of microtubules and is involved in endoplasmic reticulum tubule extension.

References:

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