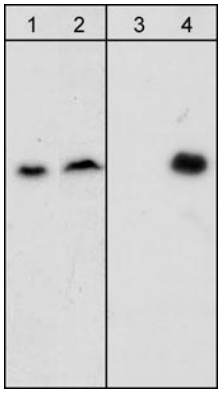
β-Dystroglycan (Tyr-892), phospho-specific

Mouse Monoclonal

Cat. # DM1171
Size 100 µl

Background

Dystroglycans are essential elements of the neuromuscular junction (NMJ). The gene for dystroglycan is expressed as a precursor protein that is post-translationally cleaved into a 156 kDa extracellular peripheral membrane protein called α-dystroglycan and a 43 kDa transmembrane protein, β-Dystroglycan. The latter protein contains a PPxY motif that promotes binding to WW domain-containing proteins, such as utrophin and dystrophin. Phosphorylation at tyrosine 892 within the PPxY motif may regulate c-Src interactions with β-Dystroglycan, as well as inhibit interactions with WW domain proteins. In skeletal muscle, β-Dystroglycan is normally localized to the plasma membrane, however phosphorylation of Tyr-892 leads to localization of β-Dystroglycan to endosomal compartments along with c-Src. Thus, phosphorylation at Tyr-892 may have important roles in altering the localization of β-Dystroglycan during NMJ formation.



Western blot analysis of HepG2 cells untreated (lanes 1 & 3) or treated with pervanadate (1 mM) for 30 min (lanes 2 & 4). Blots were probed with anti-β-Dystroglycan (lanes 1 & 2) and anti-β-Dystroglycan (Tyr -892) (lanes 3 & 4).

Background References

James, M. et al. (2000) J Cell Sci. 113(Pt 10):1717-1726.
Sotgia, F. et al. (2003) Biochem. 42(23):7110-7123.

Applications

WB	1:1000
ELISA	1:2000

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

Specificity

The antibody detects a 43 kDa* protein on SDS-PAGE immunoblots of human HepG2 or HeLa cells treated with pervanadate, but not in control cells.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Immunogen

Uniprot ID: Q14118

Clone (M117) was generated from a synthetic peptide (coupled to KLH) corresponding to amino acid residues around tyrosine 892 of human dystroglycan. This peptide sequence has high homology to the conserved tyrosine site in rat and mouse dystroglycan.

Buffer and Storage

Mouse monoclonal antibody purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Related Products

AP2041	Atrogin-1 Rabbit Polyclonal
DM2051	β-Dystroglycan (C-terminal region) Mouse Monoclonal
MK6170	Muscle Atrophy Ubiquitin Ligase Antibody Sampler Kit
SP1371	c-Src (Tyr-215)[conserved site], phospho-specific Rabbit Polyclonal

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