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Monoclonal Antibody to DSD-1 - Purified

Alternate names: DSD-1-PG, DSD-1-proteoglycan, DSD1

Catalog No.: AM32511PU-N

Quantity: 0.1 mg

Concentration: Lot Specific

Background: Anti-DSD-1 reacts with a glycosaminoglycan epitope selectively expressed on radial gliacytes of which a subpopulation shows stem cell properties. Cells isolated with this antibody from embryonic mouse tissue had multipotent characteristics and could turn into neurons, astrocytes and oligodendrocytes. The epitope is highly conserved and has been found in several vertebrates.

Uniprot ID: Q9WUT8

NCBI: 10090

Host / Isotype: Rat / IgM

Clone: 473HD

Immunogen: "rest-L2" glycoprotein fraction from adult mouse brain.

Format:
State: Liquid purified IgG fraction
Purification: Ammonium Sulfate Precipitation
Buffer System: PBS
Preservatives: 0.05% Sodium Azide

Applications:
Western Blot Analysis: This antibody can detect DSD-1 at 0.1 µg/ml in Mouse brain tissue Lysate.
Immunocytochemistry: 1 µg/ml on frozen tissue sections with 4%w/v paraformaldehyde in PBS (Ref.6,8).
Immunoprecipitation: 10 µg/ml as working concentration (Ref.9).
ELISA: Direct ELISA with working concentration of 1 µg/ml or less (Ref.2)
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight: Smear between 400-1000 kDa.

Specificity: This antibody recognizes the DSD-1 Glycosaminoglycan structure. The DSD-1 epitope is part of DSD-1 proteoglycan, the Mouse homologue of Rat phosphacan.

Species Reactivity: **Tested:** Mouse, Human, Embryonic Chicken and Amphibian tissue.

Storage: Store undiluted at 2-8°C.
Shelf life: one year from despatch.

General Readings:
1. Faissner, A., et al (2006) Adv Exp Med Biol. 557:25-53
2. Faissner., A et al. (1994) J Cell Biol. 126: 783-99
3. Clement, A., et al. (1998) J Biol Chem. 273: 28444-53

4. Hikino, M., et al.(2003) J Biol Chem. 278: 43744-54
5. Ito, Y., et al.(2005) Glycobiology 15: 593-603
6. Von Holst, A., et al.(2006) J Neuro. 26: 4082-4094
7. Heyman, I. et al. (1995) Dev Dyn. 204: 301-315
8. Sirko, S., et al. (2007) Development. 134:2727-38
9. Schnadelbach, O., et al. (1998) Glia 23, 99-119

Protocols:

Western Blotting (Lot NG1723885)
1. Mix the samples (organ membranes: 50 µg/lane; transfected cells: 500,000 cells/lane) with sample-buffer X 2, and heat 10 min at 70°C.
2. 5-50 µL applied to Minigel lane (0.75-1.5 mm width) and run at standard conditions. (60 mA for 2 1.5 mm Minigel gels, 1.4 h). It is suggested that you run 5-15% acrylamide (37.5:1 acrylamide:bisacrysmide) minigel (1.5 mm width) at 30 mA/gel ~1-1.5 hours.
3. Transfer in semi-dry system under standard conditions (3 h 100 mA for two minigel gels).
4. Stain the transferred bands with BLOT-FastStain.
5. Destain with deionized water.
6. Block with 5% non-fat milk (Marvel or Carnation) in PBS, and 0.025 % sodium azide, overnight at 2-8°C. The non-fatmilk should be dissolved freshly, centrifuged 10,000 rpm for 10 min, and filtered through glass filter (Gelman Acrodisc).
7. Incubation with first antibody 2 h at room temperature or overnight at 4°C in blocking solution. Th e antibody preparation should be centrifuged before use (10,000 g for 5 min.). Optimal working dilutions and incubation time will need to be determined by the end user.
8. Wash 4 x 10 min. with PBS-0.1% tween 20. From this stage, azide should be omitted.
9. Incubation with the secondary antibody (HRP-conjugated Goat anti-Rabbit antibody, diluted appropriately) 1 h at room temperature.
10. Wash 4 x 10 min. with PBS-0.1% tween 20.
11. Perform ECL with commercial kits.

Pictures:

Western Blot Analysis: DSD-1 Antibody Cat.-No AM32511PU-N can detect DSD-1 at 0.1 µg/ml in Mouse brain.