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Human Reactive Exosome Marker Antibody Sampler Kit



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1 Kit (7 x 20 microliters)

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
CD9 (D8O1A) Rabbit mAb	13174	20 µl	22, 24, 35 kDa	Rabbit IgG
CD81 (D3N2D) Rabbit mAb	56039	20 µl	22 kDa	Rabbit IgG
CD63 (E1W3T) Rabbit mAb	52090	20 µl	25-60 kDa	Rabbit IgG
TSG101 (E6V1X) Rabbit mAb	72312	20 µl	50 kDa	Rabbit IgG
Alix (E6P9B) Rabbit mAb	92880	20 µl	90-100 kDa	Rabbit IgG
Flotillin-1 (D2V7J) XP® Rabbit mAb	18634	20 µl	49 kDa	Rabbit IgG
Syntenin-1/MDA9 (E2I9L) Rabbit mAb	27964	20 µl	30 kDa	Rabbit IgG
HSP70 Antibody	4872	20 µl	72, 73 kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The Human Reactive Exosome Marker Antibody Sampler Kit provides an economical means of analyzing proteins that can be present on exosomes. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA, 50% glycerol, and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibodies.*

Background

Exosomes are small (30-150 nm) membrane-bound vesicles that are secreted by various cell types under normal and pathological conditions (1,2). They originate from intracellular multivesicular endosomes upon fusion with the plasma membrane. Exosomes have emerged as an important mechanism of intercellular communication facilitating the transfer of membrane and cytosolic proteins, lipids, and RNA.

A variety of methods have been described to isolate exosomes and understand their composition (3-7). Heterogeneity in exosome composition can be attributed to the cells of origin as well as the isolation methods. However, there are protein markers that appear with high frequency. Tetraspanins are a family of cell surface glycoproteins with four transmembrane domains often found in exosomes (8). Tetraspanins CD9, CD81, and CD63 appear in exosomes and have been the target of immune-affinity approaches of exosome isolation. Flotillin-1 is a lipid raft-associated integral membrane protein that is incorporated into exosomes (9). Exosomes also contain proteins involved in endosomal membrane trafficking, collectively known as the ESCRT (endosomal sorting complex required for transport) pathway. Alix regulates cellular processes, such as endocytic membrane trafficking and cell adhesion through interactions with ESCRT proteins including endophilins, and CIN85 (Cbl-interacting protein of 85 kDa), and plays a role in exosome biogenesis (10-12). Syntenin-1 (MDA9, SDCBP) is a member of the PDZ family of proteins that functions as a scaffold adaptor protein regulating numerous signal transduction pathways (13). Syntenin-1 interacts with Alix to regulate exosome biogenesis (12). Tumor susceptibility gene 101 (TSG101) is a fundamental component of the ESCRT complex I involved in regulating the trafficking of proteins throughout the endosomal compartment (14). TSG101 is involved in regulating diverse biological processes, such as cell proliferation, viral budding and release, and exosome biosynthesis (15,16). The heat shock protein HSP70 is a molecular chaperone involved in protein folding that can be induced upon environmental stress (17). HSP70 may also be secreted through exosomes (18).

Background References

- Raposo, G. and Stoorvogel, W. (2013) *J Cell Biol* 200, 373-83.
- van Niel, G. et al. (2018) *Nat Rev Mol Cell Biol* 19, 213-228.
- Jeppesen, D.K. et al. (2019) *Cell* 177, 428-445.e18.
- Kowal, J. et al. (2016) *Proc Natl Acad Sci U S A* 113, E968-77.
- Sidhom, K. et al. (2020) *Int J Mol Sci* 21, 6466. doi: 10.3390/ijms21186466.
- Patel, G.K. et al. (2019) *Sci Rep* 9, 5335.
- Tauro, B.J. et al. (2012) *Methods* 56, 293-304.

8. Hemler, M.E. (2005) *Nat Rev Mol Cell Biol* 6, 801-11.
 9. de Gassart, A. et al. (2003) *Blood* 102, 4336-44.
 10. Katoh, K. et al. (2003) *J Biol Chem* 278, 39104-13.
 11. Chatellard-Causse, C. et al. (2002) *J Biol Chem* 277, 29108-15.
 12. Baietti, M.F. et al. (2012) *Nat Cell Biol* 14, 677-85.
 13. Pradhan, A.K. et al. (2020) *Cancer Metastasis Rev* 39, 769-781.
 14. Katzmann, D.J. et al. (2001) *Cell* 106, 145-55.
 15. Garrus, J.E. et al. (2001) *Cell* 107, 55-65.
 16. Zhong, Q. et al. (1998) *Cancer Res* 58, 2699-702.
 17. Nollen, E.A. and Morimoto, R.I. (2002) *J Cell Sci* 115, 2809-16.
 18. Zhan, R. et al. (2009) *Biochem Biophys Res Commun* 387, 229-33.
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