PRODUCT INFORMATION

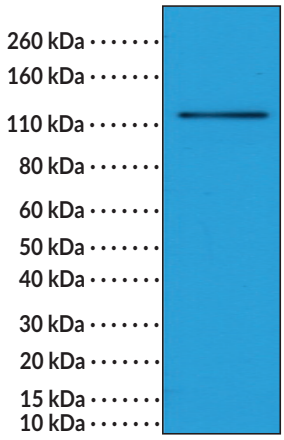
N-Cadherin Monoclonal Antibody (Clone RM259)

Item No. 32208

Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Neural cadherin, Cadherin-2, CDH2
Immunogen:	Peptide corresponding to human N-cadherin
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM259
Host:	Rabbit
Isotype:	IgG
Applications:	Western blot (WB); the recommended starting dilution is 1:1,000-1:2,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



WB of HeLa whole cell lysates using N-Cadherin Monoclonal Antibody (Clone RM259).

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Description

N-cadherin is an adhesion molecule that mediates the formation of adherens junctions and regulates tissue formation and neural development.[1,2] It is a transmembrane glycoprotein that contains an extracellular cadherin domain that forms cell-cell interactions, a transmembrane domain, and a cytoplasmic domain that interacts with a variety of adaptor proteins, including β-catenin, to influence cytoskeletal dynamics.[1] N-cadherin is widely expressed in the nervous system, as well as in osteoblasts, endothelial cells, and stromal cells, and localizes to the cell surface where it forms adherens junctions that stabilize FGFR, activating ERK/MAPK signaling and promoting cell survival and migration.[2] N-cadherin cell surface expression is regulated by endocytosis and is required for neuronal patterning and regulation of FGFR activity.[3] Upregulation of N-cadherin is a key feature of the epithelial-mesenchymal transition (EMT), a process that promotes tumorigenesis and cancer metastasis.[1] Tumor N-cadherin levels are increased in patients with a variety of epithelial or non-epithelial solid cancers, including lung, breast, or skin, and are associated with decreased overall survival.[4] Cayman's N-Cadherin Rabbit Monoclonal Antibody (Clone RM259) can be used for Western blot (WB) applications.

References

1. Cao, Z.-Q., Wang, Z., and Leng, P. Aberrant N-cadherin expression in cancer. *Biomed. Pharmacother.* **118**, 109320 (2019).
2. Loh, C.-Y., Chai, J.Y., Tang, T.F., *et al*. The E-cadherin and N-cadherin switch in epithelial-to-mesenchymal transition: Signaling, therapeutic implications, and challenges. *Cells* **8(10)**, 1118 (2019).
3. Kowalczyk, A.P. and Nanes, B.A. Adherens junction turnover: Regulating adhesion through cadherin endocytosis, degradation, and recycling. *Subcell. Biochem.* **60**, 197-222 (2012).
4. Mrozik, K.M., Blaschuk, O.W., Cheong, C.M., *et al*. N-cadherin in cancer metastasis, its emerging role in haematological malignancies and potential as a therapeutic target in cancer. *BMC Cancer* **18(1)**, 939 (2018).

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