

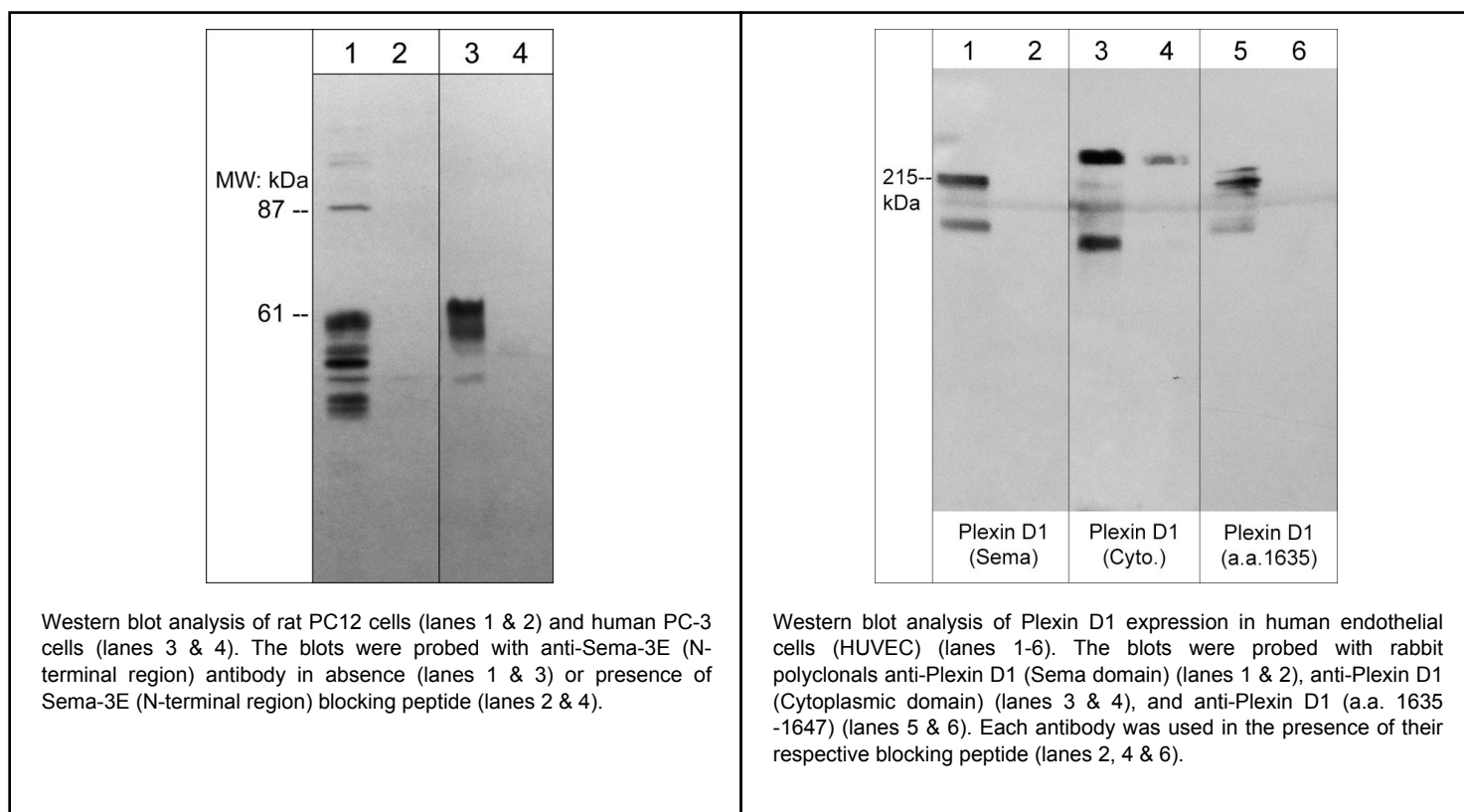
### Kit Summary

The Sema-3E and Plexin D1 Receptor kit can be used to monitor the expression of Sema-3E and its receptor Plexin D1. The kit has an N-terminal region Sema-3E antibody, and Plexin D1 antibodies for detecting two regions in the cytoplasmic domain and a region in the extracellular Sema domain. The kit also includes secondary reagent for rabbit polyclonal antibody detection.

### Kit Components

Cat. #	Description	Product Type	Size	Applications	Species Reactivity	WB Dilution
PP4401	Plexin D1 (Cytoplasmic domain)	Rabbit pAb	50 µl	WB, E	Hu, Rt, Ms	1:1000
PP4421	Plexin D1 (Sema Domain)	Rabbit pAb	50 µl	WB, E	Hu, Rt, Ms	1:500
PP4441	Plexin D1 (a.a. 1635-1647)	Rabbit pAb	50 µl	WB, E	Hu, Rt, Ms	1:500
SP4461	Semaphorin-3E (N-terminal region)	Rabbit pAb	50 µl	WB, E	Hu, Rt, Ms, Ck	1:1000
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 µl	WB, E, ICC, IHC	Rb	1:5000

Applications: WB = Western blot, E = ELISA, ICC = Immunocytochemistry, IP = Immunoprecipitation, IHC = Immunohistochemistry, FC = Flow Cytometry  
Species: H = Human, R = Rat, Ms = Mouse, C = Chicken, F = Fish, Fr = Frog, Rb = Rabbit



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### Background

Plexins are a family of large integral membrane proteins that complex with neuropilins to form semaphorin co-receptors. The extracellular region of plexins contains a semaphorin domain, multiple glycine-rich motifs, and MET-related sequences. The cytoplasmic region contains a Sex/Plexin domain and putative tyrosine phosphorylation sites that mediate signal transduction after activation. Plexin D1 is a type I transmembrane protein that may be expressed as multiple isoforms in many cell types, including neurons and endothelial cells. Semaphorin 3E (Sema-3E) and semaphorin 4A can bind Plexin D1, and ligand binding leads to phosphorylation of Tyr-1642 and activation of Plexin D1. Sema-3E and its receptor are important for angiogenesis that occurs during blood vessel development and repair. In cancers, Sema-3E and Plexin D1 are expressed in tumor tissues and cancer cells, and the interaction of these molecules may promote cancer cell migration and metastatic spreading. Thus, Plexin D1, and its ligand Sema-3E, may be important regulators of angiogenesis and metastasis.

### Background References

- Casazza, A. et al. (2010) *J Clin Invest.* 120(8):2684.  
Deutsch, U. (2004) *Dev Cell.* 7(1):1.

### Buffer and Storage

Rabbit polyclonal antibodies are supplied in phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. The secondary reagents are supplied in the same buffer without azide. Store all at  $-20^{\circ}\text{C}$ . Stable for 1 year.

### Product Citations

<u>Cat. #</u>	<u>Citation &amp; Application</u>
PP4401	Mazzotta, C. et al. (2015) <i>Arthritis Res Ther.</i> 17(1):221. (WB: human endothelial cells)
PP4421	Mazzotta, C. et al. (2015) <i>Arthritis Res Ther.</i> 17(1):221. (WB: human endothelial cells)
PP4441	Mazzotta, C. et al. (2015) <i>Arthritis Res Ther.</i> 17(1):221. (WB: human endothelial cells)
SP4461	Mazzotta, C. et al. (2015) <i>Arthritis Res Ther.</i> 17(1):221. (WB: human endothelial cells)
RS3251	Kawasaki, H. et al. (2013) <i>World J Gastroenter.</i> 19(17):2629. (WB, ICC: mouse intestinal myofibroblasts and
RS3251	Estrada-Bernal, A. et al. (2011) <i>J Neurooncol.</i> 102:353. (Western blot)

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