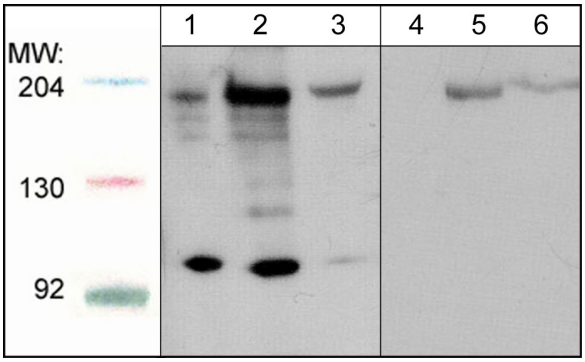
Robo1 (C-terminal region) Peptide

Cat. # RX2795

Size 50 µg

Background:

The Robo family of repulsive guidance receptors (Robo1-4) have important roles in controlling axon guidance and cell migration. These receptors are members of the immunoglobulin (Ig) superfamily and consist of an ectodomain with five Ig domains and three fibronectin type III repeats, a single transmembrane domain, and a long cytoplasmic tail that contains four blocks of conserved cytoplasmic sequences. In Drosophila, mutations in Robo, and its midline-expressed ligand Slit, result in too many axons crossing and staying at the midline. Several proteins that regulate the actin cytoskeleton, including cAbl, Ena, and Rho-family GTPases, contribute to the Robo signaling pathway. cAbl phosphorylates Robo1 at Tyr-1073, and this may inhibit Robo activity, while Slit-Robo signaling activates both Rac and Rho, and inactivates Cdc42. Thus, Robo guidance receptors control axon outgrowth and cell migration through activation of cell signaling pathways that regulate cytoskeletal dynamics.



Western blot analysis of HepG2 (lanes 1 & 4), C2C12 (lanes 2 & 5), and HUVEC (lanes 3 & 6). The blot was probed with anti-Robo1 (C-terminal region) in absence (lanes 1-3) or presence of Robo1 (C-terminal region) blocking peptide (RX2795; lanes 4-6).

References

Kidd, T. et al. (1998) Cell 92:205.
Bashaw, G.J. et al. (2000). Cell 101:703.
Yang, L. & Bashaw, G.J. (2006). Neuron 52:595.

Peptide Sequence:

Robo1 synthetic peptide corresponds to amino acids in the C-terminal region of human Robo1 This sequence has significant homology to the same region in rat and mouse Robo1, and has low homology to other Robo family members.

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.
Store at –20°C. Stable for 1 year.

Applications:

Blocking 1:1000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Specificity:

This peptide is recognized by Robo1 (C-terminal region) antibody (RP2791) in ELISA, and has been shown to block the reactivity of RP2791 in Western blot, and is recommended for blocking in immunocytochemistry.

Related Products:

RP2791 Robo1 (C-terminal region) Rabbit Polyclonal
RP2861 Robo2 (C-terminal Region) Rabbit Polyclonal
SP1221 Semaphorin-3A (Central Region) Rabbit Polyclonal
SM1881 Semaphorin-4D (C-terminal Region) Mouse Monoclonal
PP1301 Plexin A1 (Sema Domain) Rabbit Polyclonal
NP2111 Neuropilin-1 (a1 CUB Domain) Rabbit Polyclonal

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