Product Information

LDL Receptor Blocking Peptide

Catalog No. 10007672

Cholesterol is an essential element of cell membranes and is carried around the body packaged in lipoproteins, mainly in low-density lipoproteins (LDLs). The LDL receptors (LDLR) are complex glycoproteins located on cell membranes to LDL from the blood and regulate plasma LDL cholesterol. LDLRs contain five primary domains: the ligand binding domain, the homology with the EGF precursor domain, the O-link sugars domain, the membrane-spanning region, and a cytoplasmic tail.[1] In humans, more than 60% of the LDLRs are found in the liver.[2] LDLR expression is under hormonal control both *in vivo* and *in vitro*. Mutations in the LDLR gene cause disorders such as familial hypercholesterolemia and atherosclerosis.[1]

Laboratory Procedures

This vial contains 200 µg peptide in 200 µl TBS, pH 7.4, containing 0.1% BSA and 0.02% sodium azide. The LDL receptor blocking peptide (amino acids 499-511) can be used in conjunction with Cayman's LDL Receptor Polyclonal Antibody (Catalog No. 10007665) to block protein-antibody complex formation during immunochemical analysis of the LDL receptor.

Store this peptide solution at -20°C. It will be stable for at least two years. To block antibody/protein complex formation, the following procedure is recommended:

1. Mix the LDL Receptor Polyclonal Antibody (Catalog No. 10007665) and blocking peptide together in a 1:1 (v/v) ratio in a microfuge tube. For example, mix 40 µl of antibody and 40 µl of peptide.*
2. Incubate for 1 hour at room temperature with occasional mixing prior to further dilution and application of the mixture to the immunoblot.
3. Dilute the mixture to the final working antibody concentration and apply to the slide or membrane as usual.

*This is a recommended mixture. The minimum amount of peptide needed for complete blocking has not been precisely determined and may vary depending on the sample being analyzed. The amount of peptide required may need to be increased if sufficient blocking does not occur.

References

1. Goldstein, J.L., Brown, M.S., Anderson, R.G.W., *et al.* Receptor-mediated endocytosis: Concepts emerging from the LDL receptor system. *Ann. Rev. Cell Biol.* **1**, 1-39 (1985).
2. Rudling, M.J., Reihnér, E., Einarsson, K., *et al.* Low density lipoprotein receptor-binding activity in human tissues: Quantitative importance of hepatic receptors and evidence for regulation of their expression *in vivo*. *Proc. Natl. Acad. Sci. USA* **87**, 3469-3473 (1990)

Related Product

LDL Receptor Polyclonal Antibody - Cat. No. 10007665

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