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Biotinylated Anti-Human α -PEDF Antibody (Goat; Polyclonal; Affinity Purified)

Catalog Number: AB-PEDF7
Lot Number: 201002
Quantity: 50 μ g

Source: Biotinylated α -PEDF antibody is an affinity purified goat polyclonal antibody raised against purified human PEDF protein.

Reconstitution: Reconstitute lyophilized α -PEDF Antibody in 50 μ L diH₂O.

Concentration: 1.0 mg/mL after reconstitution.

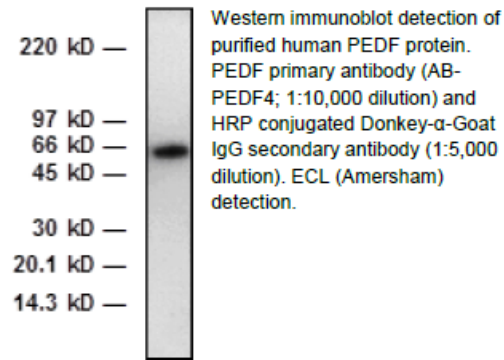
Purity & Sterility: α -PEDF Antibody has been shown to be >90% pure by SDS-PAGE. α -PEDF Antibody is provided as a non-sterile sample. The product may be rendered sterile by 0.22 μ m filtration after reconstitution.

Note: This product is for research use only. Not for use in clinical or diagnostic procedures.

Specificity: α -PEDF Antibody reacts specifically with PEDF by Western Blotting. Recommended dilution range for Western analysis: 1:500 – 1:2,500. Recommended starting dilution: 1:1,000.

Storage & Handling: α -PEDF Antibody is shipped at ambient temperature. This product is stable for at least 1 year following receipt. Store at 4°C. **Do Not Freeze!**

Background: Pigment epithelium-derived factor (PEDF) is a protein that acts in neuronal differentiation and survival in cells derived from the retina and CNS. PEDF inhibits angiogenesis and its expression is down-regulated over the replicative lifespan of mammals. This interesting factor is secreted by retinal pigment epithelial cells into the interphotoreceptor matrix, where it acts on photoreceptor cells. PEDF receptors have been localized to photoreceptors, those cells that are protected from light-induced damage and apoptosis. PEDF promotes neuronal survival through activation of NF κ B, which in turn induces expression of anti-apoptotic and/or neurotrophic factor genes. Its importance in the development, maintenance, and function of the retina and CNS is evident in animal models for



inherited and light induced retinal degeneration, as well as for degeneration of spinal cord motor neurons, and animal models for diseases triggered by choroidal and retinal neovascularization. PEDF is a member of the serpin superfamily of protease inhibitors, but it has characteristics of a substrate rather than an inhibitor of serine proteases. An N-terminus peptide region provides the neurotrophic function to the PEDF protein while other structural characteristics are dispensable (e.g. signal peptide, oligosaccharides on the polypeptide backbone, serpin exposed loop).

References:

- 1) Becerra SP. (1997) Structure-function studies on PEDF. A non-inhibitory serpin with neurotrophic activity. *Adv Exp Med Biol*, 425, 223-237..
- 2) Cayouette M, Smith SB, Becerra SP, Gravel C. (1999) Pigment epithelium-derived factor delays the death of photoreceptors in mouse models of inherited retinal degenerations. *Neurobiol Dis*, Dec;6(6), 523-532.
- 3) Houenou, LJ, D'Costa, AP, Li, L, Turgeon, VL, Enyadike, C, Alberdi, E, and Becerra, SP. (1999) Pigment epithelium-derived factor promotes the survival and differentiation of developing spinal motor neurons. *J. Comp Neurol*, 412, 506-514.
- 4) Jablonski, MM, Tombran-Tink, J, Mrazed, DA, and Iannaccone, A. (2000) Pigment epithelium-derived factor supports normal development of photoreceptor neurons and opsin expression after retinal pigment epithelium removal. *J. Neurosci*, 20, 7149-7157.
- 5) Sanchez A, Tripathy D, Yin X, Luo J, Martinez J, Grammas P (2012) Pigment epithelium derived factor (PEDF) protects cortical neurons in vitro from oxidant injury by activation of extracellular signal-related kinase (ERK1/2) and induction of Bcl-2. *Neurosci. Res Jan*; 72(1):1-8
- 6) Subramanian P, Deshpande M, Locatelli-Hoops S, Moghaddam-Taaaheri S, Gutierrez D, Fitzgerald DP, Guerrier S, Rapp M, Notario V, Becerra SP (2012) Identification of pigment epithelium derived factor protein forms with distinct activities on tumor cell lines. *J Biomed Biotechnol*. 2012: 425907
- 7) Zhang W, Feng H, Gao Y, Sun L, Wang J, Li Y, Wang C, Zhao L, Hu X, Sun H, Wei Y, Sun D (2012) Role of Pigment Epithelium-Derived Factor in Arsenic-Induced Cell Apoptosis of Liver and Brain in a Rat Model. *Biol Trace Elem. Res*. PMID 23229538