Human Progranulin/PGRN Antibody

Monoclonal Mouse IgG_{2A} Clone # 296612

Catalog Number: MAB24202

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Progranulin/PGRN in direct ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # 296612
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Progranulin/PGRN Met1-Leu593 Accession # P28799
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

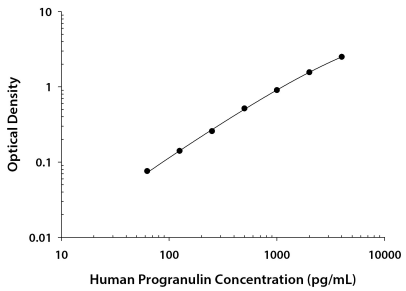
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

ELISA	This *antibody* functions as an ELISA detection antibody when paired with Mouse Anti-Human Progranulin/PGRN Monoclonal Antibody (Catalog # MAB24203). *This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human Progranulin DuoSet ELISA Kit (Catalog # DY2420) for convenient development of a sandwich ELISA or the Human Progranulin Quantikine ELISA Kit (Catalog # DPGRN0) for a complete optimized ELISA.*

DATA

ELISA



Human Progranulin/PGRN ELISA Standard Curve. Recombinant Human Progranulin/PGRN protein was serially diluted 2-fold and captured by Mouse Anti-Human Progranulin/PGRN Monoclonal Antibody (Catalog # MAB24203) coated on a Clear Polystyrene Microplate (Catalog # DY990). Mouse Anti-Human Progranulin/PGRN Monoclonal Antibody (Catalog # MAB24202) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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Human Progranulin/PGRN Antibody

Monoclonal Mouse IgG_{2A} Clone # 296612

Catalog Number: MAB24202

BACKGROUND

Progranulin, also known as acrogranin, PC cell-derived growth factor (PCDGF) and epithelin/granulin precursor, is a ubiquitously expressed, 88 kDa, secreted glycoprotein (1-3). Structurally, it does not belong to any of the well-established growth factor families (4). Human Progranulin is 593 amino acids (aa) in length and contains a 17 aa signal sequence and 5 potential sites for N-linked glycosylation. It has a highly repetitive organization, containing seven tandem copies of a 55-57 aa consensus motif that contains 12 conserved cysteine residues: VxCx5-6Cx5CCx8CCx6CCxDx2HCCPx4Cx5-6Cx2 (1). There is one alternate splice form for human Progranulin. This has a deletion of aa corresponding to aa 377-531 of the standard form. Progranulin is secreted as a full length form (2, 4), and may undergo proteolysis leading to the release of numerous peptides made from the seven tandem repeats, called the granulins (5-7). Human Progranulin shares 75% aa sequence identity with mouse and rat Progranulin. Progranulin is involved in the regulation of cellular proliferation, as well as differentiation, development, and pathological processes (4). It has been isolated as a differentially expressed gene during mesothelial differentiation (8), macrophage development (9), the development of rheumatoid arthritis and osteoarthritis (10), sexual differentiation of the brain (11), and has also been shown to be a mediator of cartilage proliferation and of wound response and tissue repair (4, 12-13). High levels of Progranulin expression have been found to be associated with several human cancers and are believed to contribute to tumorigenesis in breast cancer, clear cell renal carcinoma, invasive ovarian carcinoma, glioblastoma, adipocyte teratoma, and multiple myeloma (4-5, 12, 14-19). In addition, mutations in the Progranulin gene are a cause of frontotemporal dementia, and increased expression of Progranulin is seen in activated microglia in many neurodegenerative diseases including Creutzfeldt-Jakob disease, motor neuron disease and Alzheimer's disease (20). Mutations in Progranulin causing neurodegenerative disease indicate that Progranulin is important for neuronal survival (20).

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