Human Progranulin/PGRN Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 296628

Catalog Number: FAB2420G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects recombinant human Progranulin/PGRN in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse Progranulin/PGRN is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 296628
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Progranulin/PGRN Thr18-Leu593 Accession # P28799
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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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