Mouse Progranulin/PGRN Biotinylated Antibody

Monoclonal Rat IgG_{2A} Clone # 333729

Catalog Number: BAM25572

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Progranulin/PGRN in ELISAs. In sandwich immunoassays, no cross-reactivity with recombinant human Progranulin is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 333729
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Progranulin/PGRN Thr18-Leu589 Accession # P28798
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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.*

Mouse Progranulin Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Mouse Progranulin/PGRN Antibody (Catalog # MAB2557)
ELISA Detection	0.5-2.0 µg/mL	Mouse Progranulin/PGRN Biotinylated Antibody (Catalog # BAM25572)
Standard		Recombinant Mouse Progranulin/PGRN (Catalog # 2557-PG)

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.
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.

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 belongs to none of the well-established growth factor families (4). Mouse Progranulin is 589 amino acids (aa) in length and contains a 17 aa signal sequence and a 572 aa mature region that has four 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: $VxCx_{5-6}Cx_5CCx_8CCx_6CCxDx_2HCCPx_4Cx_{5-6}Cx_2$ (1). Progranulin is secreted in an intact form (2, 4) or undergoes proteolysis leading to the release of multiple peptides made from the seven tandem repeats, the granulins (5-7). Mouse Progranulin shares 87% and 75% aa sequence identity with rat and human Progranulin, respectively. 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), development synovium of rheumatoid arthritis and osteoarthritis (10), sexual differentiation of the brain (11), and has also been shown to be a mediator of cartilage proliferation plus 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, 14-20).

References:

1. Plowman, G.D. *et al.* (1992) J. Biol. Chem. **267**:13073.
2. Zhou, J. *et al.* (1993) J. Biol. Chem. **268**:10863.
3. Liu, Y. *et al.* (2007) BMC Cancer **7**:22.
4. Xu, K. *et al.* (2007) J. Biol. Chem. **282**:11347.
5. Davidson, B. *et al.* (2004) Cancer **100**:2139.
6. Zanocco-Marani, T. *et al.* (1999) Cancer Res. **59**:5331.
7. Lu, R. and G. Serrero (2000) Proc. Natl. Acad. Sci. U.S.A. **97**:3993.
8. Sun, X. *et al.* (2004) Am. J. Respir. Cell Mol. Biol. **30**:510.
9. Barreda, D.R. *et al.* (2004) Dev. Comp. Immunol. **28**:727
10. Justen, H.P. *et al.* (2000) Mol. Cell Biol. Res. Commun. **3**:165.
11. Suzuki, M. and M. Nishiahara (2002) Mol. Genet. Metab. **75**:31.
12. He, Z. *et al.* (2003) Nat. Med. **9**:225.
13. Zhu, J. *et al.* (2002) Cell **111**:867.
14. He, Z. and A. Bateman (2003) J. Mol. Med. **81**:600.
15. Bateman, A. *et al.* (1990) Biochem. Biophys. Res. Commun. **173**:1161.
16. Gonzalez, E.M. *et al.* (2003) J. Biol. Chem. **278**:38113.
17. Jones, M.B. *et al.* (2003) Gynecol. Oncol. **88**:S136.
18. Wang, W. *et al.* (2003) Clin. Cancer Res. **9**:2221.
19. Zhang, H. and G. Serrero (1998) Proc. Natl. Acad. Sci. U.S.A. **95**:14202.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449