



Anti- γ -subunit , Fc receptor , Mouse (Rabbit) Antibody

(Rabbit polyclonal IgG, serum)

Cat.No. SML-ROA002-EX

Size

200 μ l

Background: Receptors for the Fc portions of all Ig isotypes (FcR) have been identified on the cells of the immune system (Lynch et al. 1990). FcR on cells have structural similarities with TCR in their physical association with signaling subunits and their functional association with protein tyrosine kinase. The γ subunit of immunoglobulin Fc receptors (FcR γ) is an essential component of the high-affinity receptor for IgE and the low-affinity receptor for IgG , and is associated with the high-affinity receptor for IgG and the T cell receptor-CD3 complex (Takai et al. 1994). The γ subunit serve several functions in the FcR complex: It is essential for cell surface assembly and it mediate signaling into cell interior (Rabinowich et al. 1996). In addition, FcR γ functions as a trigger for oligodendroglial myelinogenesis (Nakahara et al. 2003). FcR γ signaling results in the up-regulation of Fyn tyrosine kinase and myelin basic protein expression levels, in addition to the morphological differentiation of oligodendrocytes.

Source / Purification: This is an affinity-purified rabbit polyclonal antibodies raised against synthetic peptide KHEKPPQ corresponding to amino acids 80-86 of γ subunit of Fc receptors.

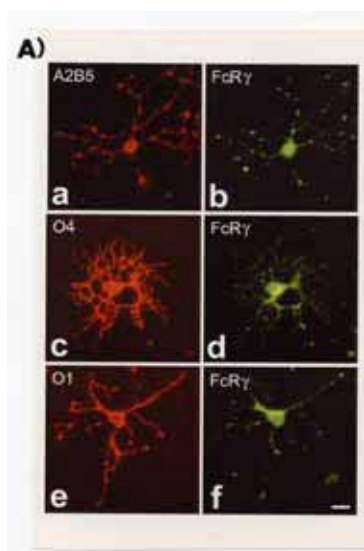
Immunogen: CKHEKPPQ (N-terminal Cys)

Specificity: Recognizes and is specific for γ -subunit.

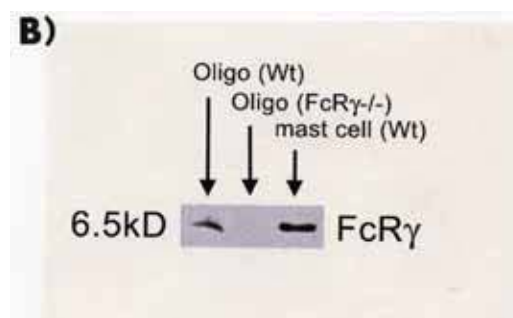
Species Cross-reactivity: mouse, rat. Other species cross-reactivity not tested.

Apparent Molecular weight: 10kDa

Recommended antibody dilutions: Immunohistochemistry Typical working dilution 1:100-1:200
Western blotting Typical working dilution 1:200-1:500
Also suitable for immunoprecipitation



A) Immunocytochemical analysis of FcR γ expression. FcR γ is expressed in A2B5-positive oligodendrocyte precursor cells (a,b). O4 (c,d)- and O1 (e,f)- positive immature oligodendrocytes. Bar=15 μ m



B) Western blotting analysis of FcR γ revealed significant expression in immature oligodendrocytes derived from wild type mice, but not from FcR γ -deficient mice.



Storage and Stability: Stable for 2 years at -20°C from date of shipment. Aliquot to avoid repeated freezing and thawing.

Formulation: Frozen solution: 200 μg of protein A purified IgG in 200 μl of 0.1M Tris-glycine, pH 7.4, 0.15M NaCl, 0.01% Sodium azide with 30% glycerol. Liquid at -20°C . This product contains sodium azide: a poisonous and hazardous substance, which should be handle by trained staff only.

Selected Application Reference:

- 1) Lynch R, Sandor M. (1990) Fc receptors on T and B lymphocytes. In Fc Receptors and the action of antibodies. H. Metzger. ed. American Society of Microbiology, Washington D. C., P.305.
- 2) Takai T, Li M, Sylvestre D, Clynes R, Ravetch JV. (1994) FcR gamma chain deletion results in pleiotrophic effector cell defects. Cell. 11;76:519-29.
- 3) Rabinowich H, Manciulea M, Metes D, Sulica A, Herberman RB, Corey SJ, Whiteside TL. (1996) Physical and functional association of Fc mu receptor on human natural killer cells with the zeta- and Fc epsilon RI gamma-chains and with src family protein tyrosine kinases. J Immunol. 15;157:1485-91.
- 4)Nakahara J, Tan-Takeuchi K, Seiwa C, Gotoh M, Kaifu T, Ujike A, Inui M, Yagi T, Ogawa M, Aiso S, Takai T, Asou H. (2003) Signaling via immunoglobulin Fc receptors induces oligodendrocyte precursor cell differentiation.Dev Cell. 4:841-52.

For research use only; not for use as a diagnostic.

