

CD3 (2Q1160): sc-70621

BACKGROUND

The T cell antigen receptor (TCR) recognizes foreign antigens and translates such recognition events into intracellular signals that elicit a change in the cell from a dormant to an activated state. Much of this signaling process can be attributed to a multi-subunit complex of proteins that associates directly with the TCR. This complex has been designated CD3 (cluster of differentiation 3). It is composed of five invariant polypeptide chains that associate to form three dimers: a heterodimer of gamma and epsilon chains ($\gamma\epsilon$), a heterodimer of delta and epsilon chains ($\delta\epsilon$) and a homodimer of two zeta chains ($\zeta\zeta$) or a heterodimer of zeta and eta chains ($\zeta\eta$). The ζ and η chains are encoded by the same gene but differ in their carboxyl-terminal ends due to an alternative splicing event. The γ , ϵ and δ chains each contain a single copy of a conserved immunoreceptor tyrosine-based activation motif (ITAM). In contrast, the ζ chain contains three consecutive copies of the same motif. Phosphorylated ITAMs act as docking sites for protein kinases such as ZAP-70 and Syk and are also capable of regulating their kinase activity. The crystal structure of the ZAP-70 SH2 domains bound to the ζ chain ITAMs has been solved.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CD3D (human) mapping to 11q23.3.

SOURCE

CD3 (2Q1160) is a mouse monoclonal antibody raised against peripheral T lymphocytes of human origin.

PRODUCT

Each vial contains 100 μg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD3 (2Q1160) is recommended for detection of CD3 of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD3 siRNA (h): sc-29987, CD3 shRNA Plasmid (h): sc-29987-SH and CD3 shRNA (h) Lentiviral Particles: sc-29987-V.

Molecular Weight of CD3: 25 kDa.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



See **CD3 (PC3/188A): sc-20047** for CD3 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647.