

Product Information

MemDX™ Membrane Protein Human TRAC (T cell receptor alpha constant) Full Length

Cat. No.: **MPC2749K**

This product is for research use only and is not intended for diagnostic use.

This product is a made-to-order Human TRAC membrane protein expressed in HEK293. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

Product Specifications

Host Species

Human

Target Protein

TRAC

Protein Length

Full length

Protein Class

Receptor; Immunity

TMD

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Sequence

IQNPDPVYQLRDSKSSDKSVCLFTDFDSQTNVSQSKDSDVYITDKTVLD
MRSMDFKSN SAVAWSNKSD FACANAFNNSIIPEDTFFPSPESSCDVKLVE
KSFETDTNLFQNL SVIGFRILLK VAGFNLLMTLRLWSS

Product Description

Expression Systems

HEK293

Tag

Based on specific requirements

Protein Format

Detergent or based on specific requirements (Detergent, Liposome, Nanodisc, Polymer, VLP)

Form

Liquid

Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -72°C or lower. Avoid freeze/thaw cycles.

Target

Target Protein

TRAC

Full Name

T cell receptor alpha constant

Introduction

T cell receptors recognize foreign antigens which have been processed as small peptides and bound to major histocompatibility complex (MHC) molecules at the surface of antigen presenting cells (APC). Each T cell receptor is a dimer consisting of one alpha and one beta chain or one delta and one gamma chain. In a single cell, the T cell receptor loci are rearranged and expressed in the order delta, gamma, beta, and alpha. If both delta and gamma rearrangements produce functional chains, the cell expresses delta and gamma. If not, the cell proceeds to rearrange the beta and alpha loci. This region represents the germline organization of the T cell receptor alpha and delta loci. Both the alpha and delta loci include V (variable), J (joining), and C (constant) segments and the delta locus also includes diversity (D) segments. The delta locus is situated within the alpha locus, between the alpha V and J segments. During T cell development, the delta chain is synthesized by a recombination event at the DNA level joining a D segment with a J segment; a V segment is then joined to the D-J gene. The alpha chain is synthesized by recombination joining a single V segment with a J segment. For both chains, the C segment is later joined by splicing at the RNA level. Recombination of many different V segments with several J segments provides a wide range of antigen recognition. Additional diversity is attained by junctional diversity, resulting from the random addition of nucleotides by terminal deoxynucleotidyltransferase. Five variable segments can be used in either alpha or delta chains and are described by TRAV/DV symbols. Several V and J segments of the alpha locus are known to be incapable of encoding a protein and are considered pseudogenes.

Alternative Names

TRAC; TRA; IMD7; TCRA; TRCA; T cell receptor alpha constant

Gene ID

[28755](#)

UniProt ID

[P01848](#)