Recombinant Human NTB-A/SLAMF6 His tag

Catalog Number: 9299-NT

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived Gln22-Met226, with a C-teminal 6-His tag Accession # Q96DU3
N-terminal Sequence Analysis	No results obtained. Gln22 inferred from enzymatic pyroglutamate treatment revealing Ser23
Predicted Molecular Mass	24 kDa

SPECIFICATIONS

SDS-PAGE	34-42 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human NTB-A/SLAMF6 is coated at 1 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human NTB-A/SLAMF6 Fc Chimera that produces 50% optimal binding response is 0.6-3 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in 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. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

NTB-A, also known as Ly108 and SLAMF6, is a 60 kDa type I transmembrane glycoprotein in the SLAM subgroup of the CD2 family (1). Mature human NTB-A consists of a 205 amino acid (aa) extracellular domain (ECD) with one Ig-like V-set and one Ig-like C2-set domain, a 21 aa transmembrane segment, and an 84 aa cytoplasmic domain with two immunoreceptor tyrosine-based switch motifs (ITSMs) (2, 3). An alternatively spliced isoform is truncated in the cytoplasmic domain and lacks the two ITSMs. Within the ECD, human NTB-A shares 48% aa sequence identity with mouse and rat NTB-A. The ECD of human NTB-A shares 19%-34% aa sequence identity with comparable regions of human 2B4, BLAME, CD2F-10, CD84, CD229, CRACC, and SLAM. NTB-A is expressed on the surface of NK, T, and B lymphocytes as well as eosinophils (2, 4, 5). It interacts homophilically through weak associations between the Ig-V domains (2, 5-7). NTB-A functions as an activating coreceptor on NK and T cells (2, 5, 6, 8). Tyrosine phosphorylation in the membrane proximal ITSM enables specific association with EAT-2, an interaction that is required for NTB-A mediated cytotoxicity of NK cells (9). Phosphorylation-dependent NTB-A association with SAP is required for full production of IFN-γ by NK cells (5, 9). This interaction is independent of EAT-2 binding and appears to involve the membrane distal ITSM (5, 9). NTB-A deficient mice show weakened Th2 responses and elevated levels of neutrophil-derived inflammatory mediators (10). In B cells, NTB-A modulates immunoglobulin class switching and the balance between tolerance and autoimmunity (5, 11). In addition, NTB-A binds to the influenza virus hemagglutinin (HA) protein which co-stimulates NK cell activation (12). The Vpu protein encoded by HIV-1 interferes with NTB-A glycosylation and cell surface expression (13).

References:

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