

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived		
	Human BAI2 (Phe21-Asp911) Accession # O60241-3	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Phe21		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	123 kDa		

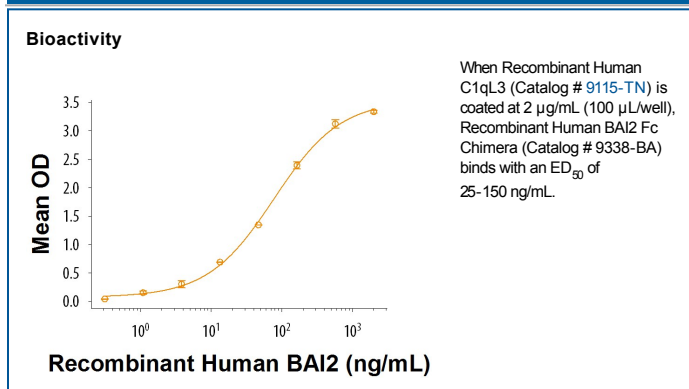
SPECIFICATIONS

SDS-PAGE	128-200 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human C1qL3 (Catalog # 9115-TN) is immobilized at 2 µg/mL, 100 µL/well, the concentration of Recombinant Human BAI2 Fc Chimera that produces 50% of the optimal binding response is approximately 25-150 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>85%, 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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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.

DATA



BACKGROUND

Brain angiogenesis inhibitor 2 (BAI2), along with BAI1 and BAI3, form a subfamily of brain specific adhesion GPCRs. They are large, glycosylated molecules, approximately 180-220 kDa, and play a role in neuronal synapse formation and maintenance. Mature human BAI2 consists of a 903 amino acid (aa) N-terminal extracellular domain (ECD) containing four TSP1 domains, a hormone binding domain (HBD), a GAIN domain and a GPS protease sensitive linker, followed by a region with seven transmembrane segments and a 410 aa C-terminal cytoplasmic domain (1). Within the N-terminal ECD, human BAI2 shares 96% aa sequence identity with both mouse and rat BAI2. BAI2 is expressed primarily in neurons and astrocytes of the hippocampus and cerebral cortex in the brain (2, 3). To become functional, BAI2 might require activation by cleavage at the GPS domain (4). BAI family members are known to bind the C1q-like complement (C1qL) family via thrombospondin type 1 repeats (TSRs) which are conserved between BAI members (5). BAI2 has been shown to suppress expression of VEGF leading to increased neurogenesis in the dentate gyrus of the hippocampus (6).

References:

1. Duman, J.G. *et al.* (2016) *Neural Plast.* **2016**:8301737.
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3. Kee, H.J. *et al.* (2002) *J. Cereb. Blood Flow Metab.* **22**:1054.
4. Daisuke, O. *et al.* (2010) *J. Recept Signal Transduct Res* **30**:143.
5. Bolliger, M.F. *et al.* (2011) *Proc. Natl. Acad. Sci. USA* **108**:2534.
6. Jeong, B.C. *et al.* (2016) *FEBS Lett* **580**:669.