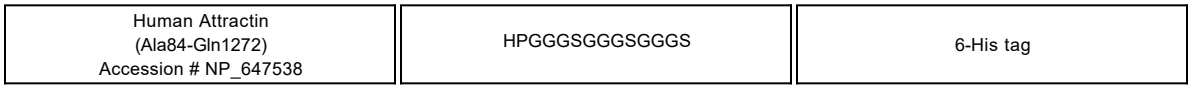
Recombinant Human Attractin

Catalog Number: 7238-AT

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived



N-terminal Sequence Analysis	Ala84
Predicted Molecular Mass	135 kDa

SPECIFICATIONS

SDS-PAGE	150-180 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When recombinant mouse Agouti is coated at 1 µg/mL, Recombinant Human Attractin binds with apparent K_D <40 nM.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
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

Attractin, also known as DPPT-L and Mahogany, is a transmembrane glycoprotein with functions in hair pigmentation, axon myelination, energy balance regulation, and immune activation (1, 2). Mature human Attractin consists of a 1196 amino acid (aa) extracellular domain, a 21 aa transmembrane segment, and a 129 aa cytoplasmic domain (3). Within the ECD, it shares 95% aa sequence identity with mouse and rat Attractin. Alternative splicing generates an approximately 175 kDa secreted soluble isoform that corresponds to the ECD of the transmembrane form (4, 5). Attractin is expressed in activated T cells, monocytes, hair follicle melanocytes, brain (notably the hypothalamus, hippocampus, and substantia nigra), and adipose tissue (3, 6-9). Activated T cells release soluble Attractin which then co-stimulates T cell proliferation (3, 4). Attractin also functions with Melanocortin 1R as a co-receptor for Agouti and, as a soluble molecule, can neutralize the bioactivity of Agouti on hair follicle melanocytes (7, 8, 10, 11). Similarly, mutations in Attractin gene suppresses the diet-induced obesity which is characteristic of Agouti overexpressing mice (1, 7). In the CNS, Attractin plays a role in axon myelination, neurite branching on differentiating neurons, and protection from neurotoxins (1, 9, 12). It is elevated in the CSF in high grade malignant astrocytoma and promotes glioma cell migration (14).

References:

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