# Human GAP43 / Neuromodulin Protein (His Tag)

**Catalog Number:** **12408-H08H**

## General Information

**Gene Name Synonym:**

B-50; PP46

**Protein Construction:**

A DNA sequence encoding the human GAP43 (P17677) (Met 1-Ala 238) was fused with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 96 % as determined by SDS-PAGE

**Endotoxin:**

< 1.0 EU per μg of the protein as determined by the LAL method

**Stability:**

Samples are stable for up to twelve months from date of receipt at -70 ℃

**Predicted N terminal:** Met 1

**Molecular Mass:**

The recombinant human GAP43 consists of 249 amino acids and has a predicted molecular mass of 26.2 kDa. As a result of glycosylation, the apparent molecular mass of rhGAP43 is approximately 47 kDa in SDS-PAGE under reducing conditions.

**Formulation:**

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

**Storage:**

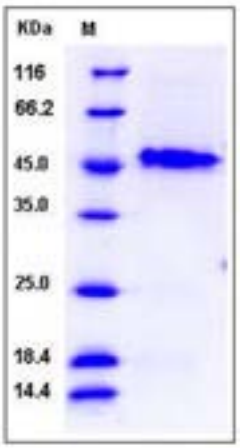
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

**Reconstitution:**

Detailed reconstitution instructions are sent along with the products.

**SDS-PAGE:**




## Protein Description

Neuromodulin, also known as Axonal membrane protein GAP-43, Growth-associated protein 43, Neural phosphoprotein B-50, pp46 and GAP43, is a cell membrane protein which belongs to theneuromodulin family. Neuromodulin / GAP43 contains oneIQ domain. Neuromodulin / GAP43 is associated with nerve growth. It is a major component of the motile "growth cones" that form the tips of elongating axons. Neuromodulin / GAP43 is involved in neurite outgrowth, a crucial process for the differentiation of neurons. The sudden infant death syndrome (SIDS) is the main cause of postneonatal infant death and its cause is still unknown. Neuromodulin / GAP43 is a marker of synaptic plasticity and is critical for normal development of the serotonergic innervation. Neuromodulin / GAP43 is a major cortical cytoskeleton-associated and calmodulin binding protein that is widely and abundantly expressed during development, maintained in selected brain structures in the adult, and reinduced during nerve regeneration. CAP23 and GAP43 are functionally related intrinsic determinants of anatomical plasticity. These proteins function by locally promoting subplasmalemmal actin cytoskeleton accumulation.

**References**

1.Frey,D. et al., 2000, J Cell Biol. 149 (7):1443-54. 2.Caprini,M. et al., 2003, EMBO J. 22 (12):3004-14. 3.Sawaguchi,T. et al., 2003, Early Hum Dev. 75 Suppl :S139-46.