

## Product datasheet for PH314318

### G protein alpha S (GNAS) (NM\_080426) Human Mass Spec Standard

#### Product data:

|                                       |  |
|---------------------------------------|--|
| Product Type:                         | Mass Spec Standards  |
| Description:                          | GNAS MS Standard C13 and N15-labeled recombinant protein (NP_536351)   |
| Species:                              | Human  |
| Expression Host:                      | HEK293   |
| Expression cDNA Clone or AA Sequence: | RC214318   |
| Predicted MW:                         | 44.1 kDa   |
| Protein Sequence:                     | >RC214318 representing NM_080426<br>Red=Cloning site Green=Tags(s)<br><br>MGCLGNSKTEDQRNEEKAQREANKKIEKQLQKDKQVYRATHRLLLL GAGESGKSTIVKQMRILHVNGFNG<br>DSEKATKVQDIKNNLKEA IETIVAAMSNLVPVELANPENQFRVDYILSVMNVPDFDFPPEFYEHAKALW<br>EDEGVRACYERSNEYQLIDCAQYFLDKIDVIKQADYVPSDQDLLRCRVLTSGIFETKFQVDKVNFMFDV<br>GGQRDERRKWIQCFNDVTAIIFVASSSYNMVIREDNQTNRLQEALNLFKSIWNNRRLRTISVILFLNKQ<br>DLLAEKVLGKSKIEDYFPEFARYTTPEDATPEPGEDPRVTRAKYFIRDEFRLISTASGDGRHYCYPHFT<br>CAVDTENIRRVFNDCRDIIQRMHLRQYELL<br><br>TRTRPLEQKLI SEEDLAANDILDYKDDDDKV |
| Tag:                                  | C-Myc/DDK  |
| Purity:                               | > 80% as determined by SDS-PAGE and Coomassie blue staining  |
| Concentration:                        | >0.05 µg/µL as determined by microplate BCA method   |
| Labeling Method:                      | Labeled with [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>4</sub> ]-L-Arginine and [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>2</sub> ]-L-Lysine   |
| Buffer:                               | 25 mM Tris-HCl, 100 mM glycine, pH 7.3   |
| Storage:                              | Store at -80°C. Avoid repeated freeze-thaw cycles.   |
| Stability:                            | Stable for 3 months from receipt of products under proper storage and handling conditions.   |
| RefSeq:                               | <a href="#">NP_536351</a>  |
| RefSeq Size:                          | 1551   |
| RefSeq ORF:                           | 1140   |
| Synonyms:                             | AHO; C20orf45; GNAS1; GPSA; GSA; GSP; NESP; PITA3; POH; SCG6; SgVI   |
| Locus ID:                             | 2778   |



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UniProt ID: [Q5FWY2](#), [O95467](#), [P63092](#), [A0A0S2Z3S5](#)

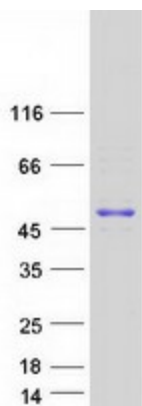
Cytogenetics: 20q13.32

**Summary:** This locus has a highly complex imprinted expression pattern. It gives rise to maternally, paternally, and biallelically expressed transcripts that are derived from four alternative promoters and 5' exons. Some transcripts contain a differentially methylated region (DMR) at their 5' exons, and this DMR is commonly found in imprinted genes and correlates with transcript expression. An antisense transcript is produced from an overlapping locus on the opposite strand. One of the transcripts produced from this locus, and the antisense transcript, are paternally expressed noncoding RNAs, and may regulate imprinting in this region. In addition, one of the transcripts contains a second overlapping ORF, which encodes a structurally unrelated protein - Alex. Alternative splicing of downstream exons is also observed, which results in different forms of the stimulatory G-protein alpha subunit, a key element of the classical signal transduction pathway linking receptor-ligand interactions with the activation of adenylyl cyclase and a variety of cellular responses. Multiple transcript variants encoding different isoforms have been found for this gene. Mutations in this gene result in pseudohypoparathyroidism type 1a, pseudohypoparathyroidism type 1b, Albright hereditary osteodystrophy, pseudopseudohypoparathyroidism, McCune-Albright syndrome, progressive osseus heteroplasia, polyostotic fibrous dysplasia of bone, and some pituitary tumors. [provided by RefSeq, Aug 2012]

**Protein Families:** Druggable Genome, Secreted Protein

**Protein Pathways:** Calcium signaling pathway, Dilated cardiomyopathy, Gap junction, GnRH signaling pathway, Long-term depression, Melanogenesis, Taste transduction, Vascular smooth muscle contraction, Vibrio cholerae infection

### Product images:



Coomassie blue staining of purified GNAS protein (Cat# [TP314318]). The protein was produced from HEK293T cells transfected with GNAS cDNA clone (Cat# [RC214318]) using MegaTran 2.0 (Cat# [TT210002]).