

# Giotto Biotech Distribution Catalog - February 2012

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<b>CUSTOM PROTEIN AND PEPTIDE PRODUCTION SERVICE</b> .....	<b>1</b>
<b>RECOMBINANT PROTEINS</b> .....	<b>2</b>
MATRIX METALLOPROTEINASES .....	2
S100 PROTEINS .....	3
SUPEROXIDE DISMUTASE .....	3
OTHERS.....	4
<i>Beta amyloids</i> .....	4
<i>Calbindin D9k</i> .....	4
<i>Calmodulin</i> .....	4
<i>Carbonic anhydrases</i> .....	4
<i>Maltose binding protein</i> .....	4
<i>Alpha-synuclein</i> .....	5
<b>SELECTION OF LABELED PROTEINS</b> .....	<b>5</b>
CALBINDIN-D9K .....	5
CALMODULIN.....	5
GB1 .....	5
MALTOSE BINDING PROTEIN.....	6
MMP12 .....	6
S100A1 .....	6
UBIQUITIN .....	6
<b>EXAMPLES OF OTHER PROTEINS UPON REQUEST</b> .....	<b>7</b>

## Custom protein and peptide production service

Giotto Biotech is pleased to offer, in addition to the proteins listed in this catalog, a custom production service for proteins with published expression and purification. We specialize in proteins selectively and uniformly labeled with stable isotopes, typically <sup>13</sup>C, <sup>15</sup>N, and <sup>2</sup>H.

Please contact us at [info@giottobiotech.com](mailto:info@giottobiotech.com) for customized quotes and technical service.

**NEW** - Giotto Biotech can also offer the biotech expression of polypeptides down to 30 amino acids, offering significant advantages for some applications.

## Recombinant proteins

Giotto Biotech is pleased to offer a wide range of recombinant proteins produced through expression in *E. coli*. **We specialize in proteins labeled with stable isotopes**, typically <sup>13</sup>C, <sup>15</sup>N, and <sup>2</sup>H, **and can label any protein as desired**. All Giotto Biotech products undergo a **strict quality control process** including **mass spectroscopy and NMR**.

### Matrix metalloproteinases

Recombinant human matrix metalloproteinases expressed in *E. coli*. Also available labeled with stable isotopes (<sup>2</sup>H/<sup>13</sup>C/<sup>15</sup>N). Quality control through mass spectrometry and NMR. Usage: enzyme kinetics, screening for inhibitors, substrate digestion, zymography, SDS-PAGE, WB, ELISA, antibody production.

Catalog number	Description	10 ug	5 x 10 ug	100 ug	5 x 100 ug	1 mg	> 1 mg
G04MP01C	MMP-1 catalytic domain, human, recombinant	€ 300	€ 656	€ 916	€ 2.000	€ 2.556	please enquire
G04MP01H	MMP-1 hemopexin-like domain, human, recombinant	€ 310	€ 670	€ 940	€ 2.040	€ 2.626	please enquire
G04MP02C	MMP-2 catalytic domain, fibronectin deficient, human, recombinant	€ 296	€ 616	€ 850	€ 1.770	€ 2.250	please enquire
G04MP02H	MMP-2 hemopexin-like domain, human, recombinant	€ 310	€ 670	€ 940	€ 2.040	€ 2.626	please enquire
G04MP03C	MMP-3 catalytic domain WT, human, recombinant	€ 300	€ 680	€ 970	€ 2.206	€ 2.876	please enquire
G04MP03Cm	MMP-3 catalytic domain, human, recombinant	€ 300	€ 680	€ 970	€ 2.206	€ 2.876	please enquire
G04MP03Ci	MMP-3 inactive catalytic domain, mutant with improved stability, human, recombinant	€ 356	€ 726	€ 986	€ 2.016	€ 2.560	please enquire
G04MP07C	MMP-7 catalytic domain, mutant with improved stability, human, recombinant	€ 310	€ 670	€ 940	€ 2.040	€ 2.626	please enquire
G04MP08C	MMP-8 catalytic domain, human, recombinant	€ 300	€ 640	€ 890	€ 1.900	€ 2.430	please enquire
G04MP09C	MMP-9 catalytic domain, human, recombinant	€ 310	€ 670	€ 940	€ 2.040	€ 2.626	please enquire
G04MP10C	MMP-10 catalytic domain, human, recombinant	€ 356	€ 726	€ 986	€ 2.016	€ 2.560	please enquire
G04MP12Cm	MMP-12 catalytic domain, mutant with improved stability, human, recombinant	€ 356	€ 726	€ 986	€ 2.016	€ 2.560	please enquire
G04MP12C	MMP-12 catalytic domain, human, recombinant	€ 396	€ 780	€ 1.040	€ 2.050	€ 2.610	please enquire
G04MP12H	MMP-12 hemopexin-like domain, human, recombinant	€ 396	€ 780	€ 1.040	€ 2.050	€ 2.610	please enquire
G04MP12Ci	MMP-12 inactive catalytic domain, mutant with improved stability, human, recombinant	€ 396	€ 780	€ 1.040	€ 2.050	€ 2.610	please enquire
G04MP13C	MMP-13 catalytic domain, mutant with improved stability, human, recombinant	€ 310	€ 670	€ 940	€ 2.040	€ 2.626	please enquire
G04MP13Ci	MMP-13 inactive catalytic domain, mutant with improved stability, human, recombinant	€ 396	€ 780	€ 1.040	€ 2.050	€ 2.610	please enquire
G04MP14C	MMP-14 catalytic domain, mutant with improved stability, human, recombinant	€ 310	€ 670	€ 940	€ 2.040	€ 2.626	please enquire
G04MP19C	MMP-19 catalytic domain, human, recombinant	€ 310	€ 670	€ 940	€ 2.040	€ 2.626	please enquire
G04MP20C	MMP-20 catalytic domain, human, recombinant	€ 286	€ 606	€ 840	€ 1.780	€ 2.260	please enquire

## S100 proteins

Recombinant S100 proteins expressed in *E. coli*. Also available labeled with stable isotopes (2H/13C/15N). Quality control through mass spectrometry and NMR. Usage: SDS-PAGE, WB, ELISA, antibody production.

Catalog number	Description	10 ug	5 x 10 ug	100 ug	5 x 100 ug	1 mg	> 1 mg
G02S1A01	S100A1, human, recombinant, full length	€ 147	€ 312	€ 434	€ 919	€ 1.167	please enquire
G02S1A02	S100A2, human, recombinant, full length	€ 147	€ 312	€ 434	€ 919	€ 1.167	please enquire
G02S1A04	S100A4, human, recombinant, full length	€ 165	€ 350	€ 486	€ 1.030	€ 1.307	please enquire
G02S1A05	S100A5, human, recombinant, full length	€ 154	€ 327	€ 454	€ 962	€ 1.221	please enquire
G02S1A07	S100A7, human, recombinant, full length	€ 165	€ 350	€ 486	€ 1.030	€ 1.307	please enquire
G02S1A08	S100A8, human, recombinant, full length	€ 268	€ 570	€ 791	€ 1.677	€ 2.129	please enquire
G02S1A89	S100A8-S100A9 heterodimer, human, full length	€ 407	€ 865	€ 1.200	€ 2.544	€ 3.229	please enquire
G02S1A09	S100A9, human, recombinant, full length	€ 163	€ 346	€ 480	€ 1.017	€ 1.292	please enquire
G02S1A10	S100A10, human, recombinant, full length	€ 147	€ 312	€ 434	€ 919	€ 1.167	please enquire
G02S1A12	S100A12, human, recombinant, full length	€ 147	€ 312	€ 434	€ 919	€ 1.167	please enquire
G02S1A13	S100A13, human, recombinant, full length	€ 165	€ 350	€ 486	€ 1.030	€ 1.307	please enquire
G02S1A14	S100A14, human, recombinant, full length	€ 150	€ 319	€ 442	€ 937	€ 1.190	please enquire
G02S1A16	S100A16, human, recombinant, full length	€ 166	€ 352	€ 489	€ 1.036	€ 1.315	please enquire
G02S1B01	S100B, human, recombinant, full length	€ 203	€ 431	€ 599	€ 1.269	€ 1.611	please enquire
G02S1P01	S100P, human, recombinant, full length	€ 166	€ 352	€ 489	€ 1.036	€ 1.315	please enquire

## Superoxide dismutase

Human WT-SOD1 cloned from human cDNA, expressed in *E. coli*, with a variety of ALS-related mutations. The proteins consist of the full-length human Cu/Zn SOD1S-S. The N-terminal end of the protein contains 3 additional amino acids (SFT). Also available labeled with stable isotopes (2H/13C/15N). Quality control through mass spectrometry and NMR. Usage: SDS-PAGE, WB, ELISA, antibody production.

Catalog number	Description	20 mg	10 mg	5 mg
G06SD001	SOD1 Zn/Cu, Superoxide dismutase, human, recombinant	€ 5.970	€ 4.221	€ 2.985
G06SD035	SOD1 Ile35Thr, mutant, human, recombinant		€ 5.628	€ 3.980
G06SD054	SOD1 Thr54Arg, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD067	SOD1 Leu67Val, mutant, human, recombinant		€ 5.628	€ 3.980
G06SD087	SOD1 Val87Met, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD089	SOD1 Ala89Val, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD090	SOD1 Asp90Ala, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD093a	SOD1 Gly93Ala, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD093r	SOD1 Gly93Arg, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD093d	SOD1 Gly93Asp, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD097	SOD1 Val97Met, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD100	SOD1 Glu100Gly, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD113f	SOD1 Ile113Phe, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD113t	SOD1 Ile113Thr, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD144	SOD1 Leu144Phe, mutant ALS related, human, recombinant		€ 5.628	€ 3.980
G06SD148	SOD1 Leu148Ile, mutant ALS related, human, recombinant		€ 5.628	€ 3.980

## Others

### Beta amyloids

Recombinant Alzheimer's disease-associated amyloid beta-peptide (AB) cloned from human cDNA and expressed in *E. coli*. The peptides consist of the fragments 1-40 or 1-42 of ABeta. The ABeta 1-40 fragment is available with or without an additional methionine at the N-terminus as a transcription starter; ABeta 1-42 is only available with this modification. Custom isotopic labeling available upon request. Quality control through mass spectrometry and NMR. Usage: fibrillation, cell cultures, drug screening, antibody production, ELISA, SDS-PAGE, WB.

Catalog no.	Protein	30 mg	20 mg	10 mg	5 mg
G01ABM42	Beta amyloid fragment ABeta (M1-40) recombinant, freeze dried		€ 5.160	€ 3.649	€ 2.580
G01ABM40	Beta amyloid fragment ABeta (M1-42) recombinant, freeze dried		€ 5.160	€ 3.649	€ 2.580
G01AB140	Beta amyloid fragment ABeta (1-40) recombinant, freeze dried	€ 5.160	€ 4.213	€ 2.979	€ 2.107

### Calbindin D9k

Calbindin D9k (protein S100-G, CABP, vitamin D-dependent calcium-binding protein, intestinal) cloned from bovine cDNA, expressed in *E. coli*. The protein consists of calbindin D9K, mutant P47M (residues 5-79). MW = 8.5 kDa. Swiss-Prot accession P02633. Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request.

Catalog no.	Protein	20 mg	10 mg	5 mg
G02CLB01	Calbindin D9K, bovine, recombinant, full length	€ 5.160	€ 3.649	€ 2.580

### Calmodulin

Full-length calmodulin, cloned from human cDNA, expressed in *E. coli*, residues 1-148. MW = 16.6 kDa. Swiss-Prot accession P62158. Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request. Usage: SDS-PAGE, WB, ELISA, antibody production.

Catalog no.	Protein	20 mg	10 mg	5 mg
G02CLM01	Calmodulin, human, recombinant, full length	€ 2.449	€ 1.732	€ 1.225
G02CLM60	Calmodulin, human, recombinant, full length, N60D mutant	€ 2.449	€ 1.732	€ 1.225

### Carbonic anhydrases

Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request.

Catalog no.	Protein	20 mg	10 mg	5 mg
G07CA101	Carbonic anhydrase I, human, recombinant, full length	€ 7.540	€ 5.332	€ 3.770
G07CA202	Carbonic anhydrase II, human, recombinant, full length	€ 3.650	€ 2.581	€ 1.825

### Maltose binding protein

Recombinant maltose binding protein from *E. coli*, expressed in *E. coli*. The protein consists of residues 27-392 with a mutation at T28I. With maltotriose. Swiss-Prot accession P0AEX9. MW = 40.3 kDa. Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request.

Catalog no.	Protein	20 mg	10 mg	5 mg
G03MBP01	Maltose binding protein, <i>E. coli</i> , recombinant, (aa 27-392) w/o ligand	€ 2.581	€ 1.825	€ 1.290

## Alpha-synuclein

Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request.

Catalog no.	Protein	30 mg	20 mg	10 mg	5 mg
G08SY001	Alpha-synuclein, human, recombinant, full length (freeze dried)	€ 5.610	€ 4.581	€ 3.239	€ 2.290
G08SY002	Alpha-synuclein, human, recombinant, full length (solution)	€ 5.100	€ 4.164	€ 2.944	€ 2.082

## Selection of labeled proteins

### Calbindin-D9k

Calbindin D9k (protein S100-G, CABP, vitamin D-dependent calcium-binding protein, intestinal) cloned from bovine cDNA, expressed in *E. coli*. The protein consists of calbindin D9K, mutant P47M (residues 5-79). MW = 8.5 kDa. Swiss-Prot accession P02633. Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request.

Catalog no.	Description / isotopic labeling	20 mg	10 mg	5 mg
G02CLB01	Calbindin-D9k, Calcium loaded / unlabeled	€ 5.160	€ 3.649	€ 2.580
G02CLB01	Calbindin-D9k, Calcium + lanthanide ion loaded /unlabeled	€ 6.870	€ 4.858	€ 3.435
G02CLB01	Calbindin-D9k, Calcium loaded / 13C labeled	€ 6.420	€ 4.540	€ 3.210
G02CLB01	Calbindin-D9k, Calcium + lanthanide ion loaded /13C labeled	€ 8.130	€ 5.749	€ 4.065
G02CLB01	Calbindin-D9k, Calcium loaded / 15N labeled	€ 5.280	€ 3.734	€ 2.640
G02CLB01	Calbindin-D9k, Calcium + lanthanide ion loaded /15N labeled	€ 6.990	€ 4.943	€ 3.495
G02CLB01	Calbindin-D9k, Calcium loaded / 13C/15N labeled	€ 6.570	€ 4.646	€ 3.285
G02CLB01	Calbindin-D9k, Calcium + lanthanide ion loaded /13C/15N labeled	€ 8.280	€ 5.855	€ 4.140

### Calmodulin

Full-length calmodulin, cloned from human cDNA, expressed in *E. coli*, residues 1-148. MW = 16.6 kDa. Swiss-Prot accession P62158. Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request. Usage: SDS-PAGE, WB, ELISA, antibody production.

Catalog no.	Description / isotopic labeling	30 mg	20 mg	10 mg	5 mg
G02CLM01	Calmodulin, human, recombinant, full length, unlabeled	€ 3.000	€ 2.449	€ 1.732	€ 1.225
G02CLM01	Calmodulin, human, recombinant, full length, 13C labeled	€ 4.260	€ 3.478	€ 2.460	€ 1.739
G02CLM01	Calmodulin, human, recombinant, full length, 15N labeled	€ 3.120	€ 2.547	€ 1.801	€ 1.274
G02CLM01	Calmodulin, human, recombinant, full length, 13C/15N labeled	€ 4.410	€ 3.601	€ 2.546	€ 1.800

### GB1

GB1 (immunoglobulin-binding protein G) expressed in *E. coli*. The protein consists of the beta-1 immunoglobulin-binding domain of protein G, residues 305-357, with the mutation T303Q (T2Q). This mutation reduces the cleavage of the N-terminal Met residue. MW = 6.2 kDa. Swiss-Prot accession P19909. Quality control through MS and NMR. Custom isotopic labeling available upon request.

Catalog no.	Description / isotopic labeling	40 mg	20 mg	10 mg	5 mg
G03GB101	GB1, unlabeled	€ 5.040	€ 3.564	€ 2.520	€ 1.782
G03GB101	GB1, 2H labeled	€ 8.700	€ 6.152	€ 4.350	€ 3.076
G03GB101	GB1, 13C labeled	€ 6.300	€ 4.455	€ 3.150	€ 2.227
G03GB101	GB1, 15N labeled	€ 5.160	€ 3.649	€ 2.580	€ 1.824
G03GB101	GB1, 13C/15N labeled	€ 6.450	€ 4.561	€ 3.225	€ 2.280
G03GB101	GB1, 2H/13C/15N labeled	€ 11.667	€ 8.250	€ 5.834	€ 4.125

## Maltose binding protein

Recombinant maltose binding protein from *E.coli*, expressed in *E. coli*. The protein consists of residues 27-392 with a mutation at T28I. With maltotriose. Swiss-Prot accession P0AEX9. MW = 40.3 kDa. Quality control through mass spectrometry and NMR. Custom isotopic labeling available upon request.

Catalog no.	Description / isotopic labeling	40 mg	20 mg	10 mg	5 mg
G03MBP01	Maltose binding protein, Unlabeled	€ 3.650	€ 2.581	€ 1.825	€ 1.290
G03MBP01	Maltose binding protein, 2H labeled	€ 6.575	€ 4.649	€ 3.288	€ 2.325
G03MBP01	Maltose binding protein, 13C labeled	€ 4.655	€ 3.292	€ 2.328	€ 1.646
G03MBP01	Maltose binding protein, 15N labeled	€ 3.371	€ 2.384	€ 1.686	€ 1.192
G03MBP01	Maltose binding protein, 2H/13C labeled	€ 6.865	€ 4.854	€ 3.433	€ 2.427
G03MBP01	Maltose binding protein, 2H/15N labeled	€ 8.735	€ 6.177	€ 4.368	€ 3.088
G03MBP01	Maltose binding protein, 13C/15N labeled	€ 4.775	€ 3.376	€ 2.388	€ 1.688
G03MBP01	Maltose binding protein, 2H/13C/15N labeled	€ 8.950	€ 6.329	€ 4.475	€ 3.164

## MMP12

Recombinant human matrix metalloproteinase 12 (MMP12) expressed in *E. coli*. Custom isotopic labeling available upon request. Quality control through mass spectrometry and NMR. All other MMP's from our line are also available isotopically labeled as desired. Please enquire.

Catalog no.	Description / isotopic labeling	20 mg	10 mg	5 mg
G04MP12C	MMP-12 catalytic domain, WT, unlabeled	€ 5.876	€ 4.155	€ 2.938
G04MP12C	MMP-12 catalytic domain, WT, 13C labeled	€ 6.296	€ 4.452	€ 3.148
G04MP12C	MMP-12 catalytic domain, WT, 15N labeled	€ 5.916	€ 4.183	€ 2.958
G04MP12C	MMP-12 catalytic domain, WT, 13C/15N labeled	€ 6.346	€ 4.487	€ 3.173

## S100A1

Recombinant S100A1 expressed in *E. coli*. Custom isotopic labeling available upon request. Quality control through mass spectrometry and NMR. All other S100 proteins from our line are also available isotopically labeled as desired. Please enquire.

Catalog no.	Description / isotopic labeling	30 mg	20 mg	10 mg	5 mg
G05S1A01	S100A1, unlabeled	€ 4.470	€ 3.650	€ 2.581	€ 1.825
G05S1A01	S100A1, 13C labeled	€ 5.730	€ 4.679	€ 3.308	€ 2.339
G05S1A01	S100A1, 15N labeled	€ 4.590	€ 3.748	€ 2.650	€ 1.874
G05S1A01	S100A1, 13C/15N labeled	€ 5.880	€ 4.801	€ 3.395	€ 2.400

## Ubiquitin

Full length ubiquitin (residues 1-76) cloned from human cDNA, expressed in *E. coli*. Also available with a C-terminal polyhistidine tag (6 additional histidines). MW = 8.6 kDa (9.4 kDa with His tag). Swiss-Prot accession P62988. Quality control through MS and NMR. Custom isotopic labeling available upon request.

Catalog no.	Description / isotopic labeling	40 mg	20 mg	10 mg	5 mg
G03UBQ01	Ubiquitin, unlabeled	€ 4.620	€ 3.267	€ 2.310	€ 1.633
G03UBQ01	Ubiquitin, 2H labeled	€ 8.280	€ 5.855	€ 4.140	€ 2.927
G03UBQ01	Ubiquitin, 13C labeled	€ 5.880	€ 4.158	€ 2.940	€ 2.079
G03UBQ01	Ubiquitin, 15N labeled	€ 4.740	€ 3.352	€ 2.370	€ 1.676

G03UBQ01	Ubiquitin, 2H/13C labeled	€ 8.640	€ 6.109	€ 4.320	€ 3.055
G03UBQ01	Ubiquitin, 2H/15N labeled	€ 10.977	€ 7.762	€ 5.489	€ 3.881
G03UBQ01	Ubiquitin, 13C/15N labeled	€ 6.030	€ 4.264	€ 3.015	€ 2.132
G03UBQ01	Ubiquitin, 2H/13C/15N labeled	€ 11.247	€ 7.953	€ 5.624	€ 3.976

## Examples of other proteins upon request

Some highlights of other proteins that Giotto Biotech can provide are listed below. Please contact us at [info@giottobiotech.com](mailto:info@giottobiotech.com) for enquiries and customized quotes.

Catalog no.	Description
G99SH301	Alpha spectrin domain SH3 from chicken
G12BXL01	Bcl-XL, human, recombinant, full length
G05PRB02	Beta parvalbumin, human, recombinant, full length
G09CX17S	Cox17, from <i>S. cerevisiae</i> , recombinant, full length
G10CYC01	Cytochrome c, human, recombinant, full length
G10CYC02	Cytochrome c, yeast, recombinant, full length
G13FBP05	Fatty acid-binding protein, epidermal (E-FABP), human, recombinant, full length
G09HA101	HAH1, human, recombinant, full length, cloned w/o tags
G09MK101	Menkes protein, metal binding domain 1, human, recombinant