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Proteome of Human Minor Salivary Gland Secretion

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APPENDIX

Appendix Table. Proteins Identified from Labial Minor Salivary Gland Secretion by LC-ESI-MS/MS

Protein Name	Accession Number[a]	Sample Preparations[b]	pI	MW (Da)[c]	# Full Tryptic Peptides Identified[d]	Molecular Function
Mucin-5B	Q9HC84	A,B,C	6.2	588002	17	Contribute to the lubricating and viscoelastic properties of whole saliva
Pyruvate kinase isoenzymes M1/m2	**P14618**	B,C	7.9	57805	12	Protein binding, kinase activity, pyruvate kinase activity, transferase activity
Ig gamma-1 chain C region	P01857	A	8.4	36105	9	Antigen binding, immune system process, protein binding
Salivary acidic-proline-rich protein 1/2 precursor (PRP-1/PRP-2)	**P02810**	A,C	4.6	15372	9	Protein binding, G-protein-coupled receptor activity
Basic salivary-proline-rich protein 2 (salivary-proline-rich protein)	**P02812**	A,B	12.1	37277	8	Precipitation of tannin, lubrication of oral tissue
Serum albumin	**P02768**	A,B,C	5.9	69366	7	Protein binding, ion binding, antigen binding, lipid binding
Alpha-amylase 2B	P04745	B,C	6.4	55890	7	Protein binding, hydrolase activity, metal ion binding, alpha-amylase activity
IgGFc-binding protein	Q9Y6R7	B,C	5.1	569395	7	Maintenance of the mucosal structure, immune system process
ATP-binding cassette sub-family A member 13	**Q86UQ4**	C	5.9	576239	6	Unknown function
Polymeric-immunoglobulin receptor	**P01833**	C	5.5	83313	5	Protein transporter activity, immune system process
Ig alpha-2 chain C region	P01877	B,C	5.7	36508	5	Antigen binding, immune system process
Carbonic anhydrase 6	**P23280**	A,C	6.4	33569	5	Lyase activity, metal ion binding
Mucin-7 (MUC-7)	Q8TAX7	A,B,C	9.3	36820	5	Protein binding, protective capacity by promoting the clearance of bacteria in the oral cavity and aiding in mastication, speech, and swallowing, contribute to the lubricating and viscoelastic properties of whole saliva
Actin-binding LIM protein 1	**O14639**	B,C	8.8	87644	5	Actin binding
Cystatin A	**P01040**	A,B,C	5.3	11006	4	Protein binding, cysteine protease inhibitor activity
Ig alpha-1 chain C region	P01876	A,B,C	6	37654	4	Antigen binding, immune system process, protein binding
Serotransferrin	**P02787**	A,B	6.8	77049	4	Metal ion binding
Calgranulin-B (S100A9)	**P06702**	A,B,C	5.7	13241	4	Calcium ion binding
Basic salivary-proline-rich protein 4 allele L (Salivary-proline-rich protein Po)	**P10162**	A,B,C	11.5	27815	4	Precipitation of tannin, lubrication of oral tissue
Prolactin-inducible protein	**P12273**	B,C	5.4	13522	4	Protein binding, cytoskeletal protein binding, actin binding
Transcobalamin-1	**P20061**	C	4.8	45596	4	Metal ion binding, ion transporter activity
Zinc-alpha-2-glycoprotein	**P25311**	B,C	5.5	32144	4	Lipid binding, protein transporter activity, hydrolase activity, protein binding
Calmodulin-like protein 3	**P27482**	A,C	4.3	16890	4	Metal ion binding
Cystatin D	**P28325**	B,C	6.7	13858	4	Cysteine protease inhibitor activity
Lysozyme C	P61626	B,C	9.2	14700	4	Hydrolase activity, acting on glycosyl bonds, lysozyme activity
Chromosome 6 open reading frame 58 (Uncharacterized protein C6orf58)	**Q6P5S2**	B,C	5.7	37925	4	Unknown function
Submaxillary gland androgen-regulated protein 3 homolog A precursor	**Q99954**	A,C	10	14117	4	Unknown function
Alpha-1-antitrypsin	**P01009**	A	5.3	46736	3	Protein binding, protease inhibitor activity
Cystatin SN precursor	**P01037**	B,C	6.8	16361	3	Cysteine protease inhibitor activity
Immunoglobulin J chain	P01591	A,B	4.6	15594	3	Immune system process

continued

Ig kappa chain C region	P01834	A,B	5.5	11608	3	Antigen binding, immune system process
Lactotransferrin	P02788	A,C	8.5	78181	3	Hydrolase activity, ion binding, peptidase activity, immune system process
Calgranulin-A (S100A8)	**P05109**	A,B,C	6.5	10834	3	Calcium ion binding
Fatty acid synthase	**P49327**	B,C	5.9	273399	3	Protein binding, lyase activity, oxidoreductase activity, kinase binding
Basic salivary-proline-rich protein 3 precursor (parotid salivary glycoprotein G1)	**Q04118**	B,C	10.6	29326	3	Bacterial binding, receptor activity, G-protein-coupled receptor activity
Amyloid beta A4 precursor protein binding family B member 1-interacting protein	**Q7Z5R6**	A,C	5.3	73182	3	Signal transduction from Ras activation to actin cytoskeletal remodeling
Uncharacterized aarF domain-containing protein kinase 1	**Q86TW2**	A,C	8.84	60577	3	Protein kinase activity
Bactericidal/permeability-increasing protein	**Q8N4F0**	A,B,C	8.4	47125	3	Lipid binding
Short palate, lung, and nasal epithelium carcinoma-associated protein 2	**Q96DR5**	C	5.3	27011	3	Lipid binding
PR domain zinc finger protein 7	**Q9NQW5**	A,B	8.9	45965	3	Transcriptional regulation
Kallikrein-11	**Q9UBX7**	B,C	12	5445	3	Multifunctional protease
Intron-binding protein aquarius	**O60306**	A,C	5.9	171295	2	Nucleic acid binding
Ig lambda chain C regions	P01842	A,B,C	6.9	11236	2	Antigen binding, immune system process
Lamin-A/C	**P02545**	B	6.5	74139	2	Protein binding
Basic salivary-proline-rich protein 1	**P04280**	B,C	10.2	5809	2	Precipitation of tannin, lubrication of oral tissue
Fructose-bisphosphate aldolase A	**P04075**	C	8.3	39288	2	Lyase activity, fructose-bisphosphate aldolase activity
Histatin-3	**P15516**	B,C	9.9	4062	2	Protein binding, metal ion binding, bacterial activity
Ig kappa chain V-III region HAH	P18135	A,B	9	11818	2	Antigen binding, immune system process
Actin, cytoplasmic 1	**P60709**	B	5.2	41736	2	Protein binding, nucleotide binding, ATP binding
Beta-2-microglobulin	**P61769**	A,C	6	13714	2	Protein binding
Hemoglobin alpha subunit (hemoglobin alpha chain)	**P69905**	C	8.7	15126	2	Oxygen transportation
Neutrophil gelatinase-associated lipocalin	**P80188**	C	9	20547	2	Small lipophilic substances
Preproteolysin	**P81605**	A,B	6	11283	2	Metal ion binding
Plasminogen activator inhibitor 1 RNA-binding protein	**Q8NC51**	B,C	8.6	44965	2	Protein binding, nucleic acid binding
Follicular dendritic cell secreted peptide precursor (FDC-SP) (FDC secreted protein)	**Q8NFU4**	B,C	9.3	9700	2	Bind to the surfaces of B-lymphoma cells
Cystatin S	**P01036**	A,C	4.8	14188	2	Cysteine protease inhibitor activity

[a] Protein accession numbers in bold are proteins identified for the first time in labial minor salivary gland secretion, and protein accession numbers underlined are proteins identified for the first time in a salivary sample.
[b] Sample preparations were: (A) in-gel trypsinization, (B) in-solution trypsinization, and (C) in-solution trypsinization, followed by cation exchange chromatography.
[c] The molecular weight listed represents a mass value for the polypeptide chain, excluding post-translational modifications.
[d] The protein list is arranged in descending order according to the number of tryptic peptides observed.