

Supplement 5

Neuropeptide F protein sequence alignment

<i>Chequ</i> _NPFS	1	-----MAVSVVK
<i>Chiop</i> _NPFS	1	MPLGRKPHNKVVYIIIGLSGAVSPLQQEAAGRGGNGSGYREVVLME SRP LLEIVMGVSGVK
<i>Calar</i> _NPFS	1	-----MGVNGVK
<i>Scyol</i> NPFSIB	1	-----MGHATLYVP---RSP----GCGREP--ALGMPNTRGEEEMGVNGVK
<i>Scyol</i> NPFSIa	1	-----MGHATLYVP---RSP----GCGREP--ALGMPNTRGEEEMGVNGVK
<i>Scypa</i> _NPFS	1	-----MGVNGVK
<i>Homam</i> _NPFII	1	-----MYRH
<i>Macni</i> _NPFI	1	-----MYQRVGQ
<i>Macro</i> _NPFII	1	-----MYQRVGQ
<i>Macro</i> _NPFI	1	-----MYQRVGQ
<i>Penja</i> _NPFII	1	-----MCRVSQ
<i>Penmo</i> _NPFII	1	-----MCRVSQ
<i>Calar</i> _NPFII	1	-----MCRQL-
<i>Scypa</i> _NPFII	1	-----MCRQL-
<i>Scyol</i> _NPFII	1	-----MCRQL-
<i>Scyol</i> _NPFL	1	-----
<i>Scypa</i> _NPFL	1	-----
<i>Chequ</i> _NPFII	1	-----
<i>Nepno</i> _NPFL	1	-----
<i>Homam</i> _NPFL	1	-----

<i>Chequ</i> _NPFS	8	CWVSLVCCCL-----LLAHLNTAVPTPPDYDAL-----SEVYNWLSDHGLERR
<i>Chiop</i> _NPFS	61	CWVALVCCCL-----MLCHLTTA--APADYDSL-----NDMYDWLAEHGMDRR
<i>Calar</i> _NPFS	8	CWVALVCCCL-----LLCQLTTA--APADYDTL-----NDMYDLLAVHEVERR
<i>Scyol</i> NPFSIB	37	CWVALVCCCL-----LLCQLTTA--TPVDYDTL-----NDMYDLLAVHEVERR
<i>Scyol</i> NPFSIa	37	CWVALVCCCL-----LLCQLTTA--TPVDYDTL-----NDMYDLLAVHEVERR
<i>Scypa</i> _NPFS	8	CWVALVCCCL-----LLCQLTTA--TPVDYDTL-----NDMYDLLAVHEVERR
<i>Homam</i> _NPFII	5	IWTALVGV-VIVSV-FQVSV--TQAKPDPNQLAAMADALKYLQELDKY-----YSQV
<i>Macni</i> _NPFI	8	VWAAIIVGV-VVVSVMQMG--VEGKPDPTQLAAMADALKYL-----
<i>Macro</i> _NPFII	8	VWAAIIVGV-VVVSVMQMG--VEGKPDPTQLAAMADALKYLQELDKY-----YSQV
<i>Macro</i> _NPFI	8	VWAAIIVGV-VVVSVMQMG--VEGKPDPTQLAAMADALKYLQELDKY-----YSQV
<i>Penja</i> _NPFII	7	VCAAVVVV-VLVAATDLVAV--AEAKPDPSQLANMAEALKYLQELDKY-----YSQV
<i>Penmo</i> _NPFII	7	VWAAIIVVL-FVVVATDLGGI--AEAKPDPSQLANMAEALKYLQELDKY-----YSQV
<i>Calar</i> _NPFII	6	-LTALVGV-VIVGA-LEMGG--AEAKPDPSQLAQMANAIKYLHELDKY-----YTPM
<i>Scypa</i> _NPFII	6	-LTALVGV-VVVGGA-LEMGG--AEGKPDPTQLAAMADAIKYLHELDKY-----YSPV
<i>Scyol</i> _NPFII	6	-LTALVGV-VIVGA-LEMGG--AEAKPDPTQLAQMAADVIKYLHELDKY-----YSPM
<i>Scyol</i> _NPFL	1	MRGTLTVVAVVVVSVAAWAAQ-LPSRQEGG---ALDAIQALHEAALAGTSLSSGEVPYP
<i>Scypa</i> _NPFL	1	MRGTLTVVAVVVVSVAAWAAQ-LPSRQEGG---ALDAIQALHEAALAGTSLSGEVPYP
<i>Chequ</i> _NPFII	1	MRGTMIGAVVAVMVAAV-VAGRMSAARADTS---AVEALQAMHEAAMAGILGSAEIQYP
<i>Nepno</i> _NPFL	1	MRCAMVGA VATVMVAALVAGMASAARPDNS---AADTLQAIHEAAMAGILGSAEVQYP
<i>Homam</i> _NPFL	1	MRCAMVGA VATVMVAALVAGMASAARPDNS---AADTLQAIHEAAMAGILGSAEVQYP

Percent Identity of neuropeptide F protein sequence

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1: Chequ_NPFS	100.00	67.20	72.80	69.57	72.58	72.00	21.88	23.81	22.22	24.19	21.43	23.47	20.83	19.79	20.83	18.82	18.82	18.39	19.54	19.54
2: Chiop_NPFS	67.20	100.00	79.20	61.98	65.36	76.80	19.39	20.55	20.18	23.61	21.30	22.22	20.75	22.64	21.70	14.46	15.66	17.65	18.82	20.00
3: Calar_NPFS	72.80	79.20	100.00	90.22	97.60	96.83	22.34	19.67	19.59	21.67	20.83	21.88	21.28	21.28	22.34	19.28	19.28	18.82	21.18	21.18
4: ScyolNPFSIB	69.57	61.98	90.22	100.00	95.04	93.48	20.59	14.29	16.90	15.38	17.14	18.57	19.12	17.65	19.12	13.79	13.79	13.56	16.95	16.95
5: ScyolNPFSIa	72.58	65.36	97.60	95.04	100.00	99.20	22.58	20.00	19.79	22.03	21.05	22.11	21.51	21.51	22.58	19.51	19.51	19.05	21.43	21.43
6: Scypa_NPFS	72.00	76.80	96.83	93.48	99.20	100.00	21.28	21.31	20.62	23.33	19.79	20.83	21.28	21.28	21.28	19.28	19.28	18.82	21.18	21.18
7: Homan_NPFI	21.88	19.39	22.34	20.59	22.58	21.28	100.00	64.10	73.28	65.82	68.10	65.52	60.53	64.91	64.91	29.35	28.26	31.18	34.41	34.41
8: Macnl_NPFI	23.81	20.55	19.67	14.29	20.00	21.31	64.10	100.00	100.00	100.00	70.45	71.59	66.28	73.26	68.60	29.23	27.69	27.27	31.82	31.82
9: Macro_NPFI	22.22	20.18	19.59	16.90	19.79	20.62	73.28	100.00	100.00	100.00	78.57	79.37	71.77	78.23	75.00	27.17	26.09	26.88	30.11	30.11
10: Macro_NPFI	24.19	23.61	21.67	15.38	22.03	23.33	65.82	100.00	100.00	100.00	70.79	71.91	66.67	75.86	70.11	30.30	30.30	25.37	29.85	29.85
11: Penja_NPFI	21.43	21.30	20.83	17.14	21.05	19.79	68.10	70.45	78.57	70.79	100.00	92.13	75.00	73.39	75.81	23.66	22.58	28.72	30.85	31.91
12: Penmo_NPFI	23.47	22.22	21.88	18.57	22.11	20.83	65.52	71.59	79.37	71.91	92.13	100.00	72.58	72.58	74.19	21.51	20.43	25.53	27.66	28.72
13: Calar_NPFI	20.83	20.75	21.28	19.12	21.51	21.28	60.53	66.28	71.77	66.67	75.00	72.58	100.00	84.68	89.52	27.47	26.37	29.35	30.43	30.43
14: Scypa_NPFI	19.79	22.64	21.28	17.65	21.51	21.28	64.91	73.26	78.23	75.86	73.39	72.58	84.68	100.00	90.32	29.67	28.57	25.00	28.26	28.26
15: Scyol_NPFI	20.83	21.70	22.34	19.12	22.58	21.28	64.91	68.60	75.00	70.11	75.81	74.19	89.52	90.32	100.00	27.47	26.37	26.09	30.43	30.43
16: Scyol_NPFL	18.82	14.46	19.28	13.79	19.51	19.28	29.35	29.23	27.17	30.30	23.66	21.51	27.47	29.67	27.47	100.00	98.04	59.80	60.78	60.78
17: Scypa_NPFL	18.82	15.66	19.28	13.79	19.51	19.28	28.26	27.69	26.09	30.30	22.58	20.43	26.37	28.57	26.37	98.04	100.00	57.84	58.82	58.82
18: Chequ_NPFI	18.39	17.65	18.82	13.56	19.05	18.82	31.18	27.27	26.88	25.37	28.72	25.53	29.35	25.00	26.09	59.80	57.84	100.00	84.62	84.62
19: Negan_NPFL	19.54	18.82	21.18	16.95	21.43	21.18	34.41	31.82	30.11	29.85	30.85	27.66	30.43	28.26	30.43	60.78	58.82	84.62	100.00	98.08
20: Homan_NPFL	19.54	20.00	21.18	16.95	21.43	21.18	34.41	31.82	30.11	29.85	31.91	28.72	30.43	28.26	30.43	60.78	58.82	84.62	98.08	100.00