

The cDNA sequence and primers for *FoxO* clones and sequencing results

>MN427928.1 *Locusta migratoria* FoxO mRNA, partial cds

ATGATGGAGCAGGGCCCCGCCCAGAGATGGACCCGTCGTTTCGAGCCGCAG
CAGCGCGCGCGCTCCAACACGTGGCCGCTGCCGCGCCCCGACAACTTCCT
GGACGTGGTGGTGAAGCAAGGAGCCGGGCGCGGAGGCGGGGCCGGCGGC
CGGCATGCTGGGCCCCGTGCGCCGCGGCCGTGCACGGCGCGGCCGGCTCGC
CCGTCGGCGCCCGCGGAGAGCCCGTCTACCTGTCGCCCCGCCGCCGTCTGC
GGCGCCGCCAAGAAGAACACCAGCCGCCGCAACGCCTGGGGCAACCTG
TCCTACGCCGACCTCATCACGCAGGCCATCCAGTCGGCGCCCGACCAGCG
CCTCACGCTGTCGCAGATATACGAGTGGATGGTGCAGAACGTGCCCTACT
TCAAGGACAAGGGCGACAGCAACAGCTCCGCCGGGTGGAAGAACTCGAT
CCGGCATAACCTGTCGCTGCACAATCGGTTTCATGCGCGTGCAGAACGAGG
GCACCGGCAAGTCCAGCTGGTGGATGATCAACCCGGACGCCAAGCCCGGC
AAGAGCGCGCGCCGTCGCGCCACCTCCATGGAGACCTCCAAGTTCGAGAA
GCGCCGCGGCCGCGTCAAGAAGAAGGTGGAGGCGCTGCGCAACGGGCTG
TCGGCGGCGGACGCGACGCCGTCGCCGTCCAGCTCGGTGTCGGAGGGCCT
GGACCTGTTCCCCGACTCGCCGCTGCACGCCGGCTTCCAGCTGAGCCCCG
ACTTCCGGCCCCGCGCCTCCAGCAACGCGTCGTCGTGCGGCGGCCGGCTG
TCGCCCATCCCGTCCGTGCTGGGCATGGAGCACGAGTGGGGCCCGCAGCC
GCCCCCGCAGCAGCCGCCCCCACAGCAGCCGCCCCCGCAGCAGGCGCCGC
CCCCGCAGTACGGGCTGGAGCAGCTGGCGGGCAACCTAGCCGAGAGCAT
GAAGCTGCACCACGAGACGGCGCAGCCGGCCTACCTGTTCCAGCACGCGC
CGCCGCCGCCCTACCAGCCGCAGCCGCCGCCCGCCGCCGCCCTACATG
GCCGGCGCCGGGCCCTACGCCGCCTGCCGCCTCTCGCCGTCTGTACGAGCC
CGAGTCGCCGCCACGCCGCAGCCGCAGCCGCCGCCGCCGCCGCCCGCC
AGCCCAGCGGGCCCTCCACCATGATGGGCCAGCTGATGGGCGCGCTCAAC
AACTCGACGCTGCTCGACGACCTCAACCTCAACATCGAGACGCTGCACG
GCGGCTTCGACTGCAACGTGGACGAGGTGATCAAGCACGAGCTGAGCA
TGGACGGCAGCCTCGACTTCAACTTCAGACTTCAGCCAGCACCAACCACC

ACCAGGCGATGGTGGCGGGCGGCGGCCATGGCGGCCGCGGACGGCGT
GCACCACCAGCAGCACGCGGCCGCGCAGGGCGCCGCGCCCTACGCCACC
GGGCCCTCCTGGGTGCACTAGCCA

Primers for *FoxO* clones

FoxO 1

F1: 5-AGATGGACCCGTCGTTTCGAG-3 (23-42)

R1: 5-GGCTGAAGTCTGAAGTTGAAGTC-3 (1303-1325)

FoxO 2

F2: 5-CTGGACGTGGTGGTGAAGCA-3 (97-116)

R2: 5-CGTGCTTGATCACCTCGTCC-3 (1260-1279)

FoxO 3

F3: 5-GCCAAGAAGAACACCAGCC-3 (253-271)

R3: 5-CGTCTCGATGTTGAGGTTGAGG-3 (1212-1233)

Notes: Due to the high GC content in the *FoxO* genome, nested PCR was chosen for its amplification. Here we designed three pairs of primers for nested PCR, named *FoxO 1*, *FoxO 2* and *FoxO 3*.

Sequencing results

>FoxO

GGGGCCCTGCCAGTCGACGATTGCCAAGAGACACCAGCCGCCGCAACGCCTGGGGCA
ACCTGTCTTACGCAGACCTCATCACGCAGGCCATCCAGTCGGCGCCCGACCAGCGCCT
CACGCTGTTCGCAGATATACGAGTGGATGGTGCAGAACGTGCCCTACTTCAAGGACAAG
GGCGACAGCAACAGCTCCGCCGGGTGGAAGAACTCGATCCGGCATAACCTGTCGCTG
CACAATCGGTTTCATGCGCGTGCAGAACGAGGGCACCGGCAAGTCCAGCTGGTGGATG
ATCAACCCGGACGCCAAGCCCGGCAAGAGCGCGCGCCGTCGCGCCACCTCCATGGAG
ACCTCCAAGTTCGAGAAGCGCCGCGGCCGCGTCAAGAAGAAGGTGGAGGCGCTGCG
CAACGGGCTGTCGGCGGCGGACGCGACGCGGTGCGCGTCCAGCTCGGTGTCGGAGGG



MultAlin

Multalin result page



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 Copyright 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 26

is anyone of NDQEBZ

MSF: 1460 Check: 0 ..

Name: MN427928.1 Len: 1460 Check: 9622 Weight: 1.00

Name: FoxO Len: 1460 Check: 6268 Weight: 1.00

Name: Consensus Len: 1460 Check: 4945 Weight: 0.00

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1 50

MN427928.1 ATGATGGAGC AGGGCCCCGCC CGAGATGGAC CCGTCGTTTCG
AGCCGCAGCA

FoxO

Consensus

51 100

MN427928.1 GCGCGCGCGC TCCAACACGT GGCCGCTGCC GCGCCCCGAC
AACTTCCTGG

FoxO

Consensus

101 150

MN427928.1 ACGTGGTGGT GAAGCAGGAG CCGGGCGCGG
AGGCGGGGCC GGCGGCCGGC

FoxO

Consensus

151 200

MN427928.1 ATGCTGGGCC CGTGCGCCGC GGCCGTGCAC
GGCGCGGCCG GCTCGCCCGT

FoxO

Consensus

201

250

MN427928.1 CGGCGCCGCC GGAGAGCCCG TCTACCTGTC GCCCGCCGCC
GTCGTCGGCG

FoxO GGG GCCCTGC.CA GTCGACGAT.

Consensus Ggc GCCCgcC.Ca GTCGaCGac.

251

300

MN427928.1 CCGCCAAGAA GAACACCAGC CGCCGCAACG
CCTGGGGCAA CCTGTCCTAC

FoxO .TGCCAAGAG ..ACACCAGC CGCCGCAACG CCTGGGGCAA
CCTGTCCTAC

Consensus .cGCCAAGAA ..ACACCAGC CGCCGCAACG CCTGGGGCAA
CCTGTCCTAC

301

350

MN427928.1 GCCGACCTCA TCACGCAGGC CATCCAGTCG GCGCCCGACC
AGCGCCTCAC

FoxO GCAGACCTCA TCACGCAGGC CATCCAGTCG GCGCCCGACC
AGCGCCTCAC

Consensus GCaGACCTCA TCACGCAGGC CATCCAGTCG GCGCCCGACC
AGCGCCTCAC

351

400

MN427928.1 GCTGTCGCAG ATATACGAGT GGATGGTGCA GAACGTGCCC
TACTTCAAGG

FoxO GCTGTCGCAG ATATACGAGT GGATGGTGCA GAACGTGCCC
TACTTCAAGG

Consensus GCTGTCGCAG ATATACGAGT GGATGGTGCA GAACGTGCCC

TACTTCAAGG

	401		450
MN427928.1	ACAAGGGCGA	CAGCAACAGC	TCCGCCGGGT
GGAAGAACTC GATCCGGCAT			
FoxO	ACAAGGGCGA	CAGCAACAGC	TCCGCCGGGT
GGAAGAACTC GATCCGGCAT			
Consensus	ACAAGGGCGA CAGCAACAGC TCCGCCGGGT GGAAGAACTC		
GATCCGGCAT			

	451		500
MN427928.1	AACCTGTCGC	TGCACAATCG	GTTCATGCGC
GTGCAGAACG			
AGGGCACCGG			
FoxO	AACCTGTCGC	TGCACAATCG	GTTCATGCGC
GTGCAGAACG			
AGGGCACCGG			
Consensus	AACCTGTCGC TGCACAATCG GTTCATGCGC		
GTGCAGAACG			
AGGGCACCGG			

	501		550
MN427928.1	CAAGTCCAGC	TGGTGGATGA	TCAACCCGGA
CGCCAAGCCC			
GGCAAGAGCG			
FoxO	CAAGTCCAGC	TGGTGGATGA	TCAACCCGGA
CGCCAAGCCC			
GGCAAGAGCG			
Consensus	CAAGTCCAGC TGGTGGATGA TCAACCCGGA		
CGCCAAGCCC			
GGCAAGAGCG			

	551		600
MN427928.1	CGCGCCGTCG	CGCCACCTCC	ATGGAGACCT
CCAAGTTCGA			
GAAGCGCCGC			
FoxO	CGCGCCGTCG	CGCCACCTCC	ATGGAGACCT
CCAAGTTCGA			

GAAGCGCCGC

Consensus CGCGCCGTCG CGCCACCTCC ATGGAGACCT CCAAGTTCGA

GAAGCGCCGC

601

650

MN427928.1 GGCCGCGTCA AGAAGAAGGT GGAGGCGCTG

CGCAACGGGC TGTCGGCGGC

FoxO GGCCGCGTCA AGAAGAAGGT GGAGGCGCTG

CGCAACGGGC TGTCGGCGGC

Consensus GGCCGCGTCA AGAAGAAGGT GGAGGCGCTG CGCAACGGGC

TGTCGGCGGC

651

700

MN427928.1 GGACGCGACG CCGTCGCCGT CCAGCTCGGT

GTCGGAGGGC CTGGACCTGT

FoxO GGACGCGACG CCGTCGCCGT CCAGCTCGGT

GTCGGAGGGC CTGGACCTGT

Consensus GGACGCGACG CCGTCGCCGT CCAGCTCGGT GTCGGAGGGC

CTGGACCTGT

701

750

MN427928.1 TCCCCGACTC GCCGCTGCAC GCCGGCTTCC AGCTGAGCCC

C GACTTCCGG

FoxO TCCCCGACTC GCCGCTGCAC GCCGGCTTCC AGCTAAGCCC

C GACTTCCGG

Consensus TCCCCGACTC GCCGCTGCAC GCCGGCTTCC AGCTaAGCCC

C GACTTCCGG

751

800

MN427928.1 CCCC GCGCCT CCAGCAACGC GTCGTCGTGC GGCGGCCGGC

TGTCGCCCCAT

FoxO CCCC GCGCCT CCAGCAACGC GTCGTCGTGC GGCGGCCGGC

TGTCGCCCCAT

Consensus CCCC GCGCCT CCAGCAACGC GTCGTCGTGC GGCGGCCGGC

TGTCGCCCCAT

801

850

MN427928.1 CCCGTCCGTG CTGGGCATGG AGCACGAGTG

GGGCCCCGCAG CCGCCCCCGC

FoxO CCCGTCCGTG CTGGGCATGG AGCACGAGTG GGGCCCCGCAG

CCGCCCCCGC

Consensus CCCGTCCGTG CTGGGCATGG AGCACGAGTG GGGCCCCGCAG

CCGCCCCCGC

851

900

MN427928.1 AGCAGCCGC. CCCACAGCA GCCGCCCCCG CAGCAGGCGC

CGCCCCCGCA

FoxO AGCA.CCGCA CCCACAGCA G.....

Consensus AGCA.CCGC. CCCACAGCA G.....

901

950

MN427928.1 GTACGGGCTG GAGCAGCTGG CGGGCAACCT

AGCCGAGAGC ATGAAGCTGC

FoxO

Consensus

951

1000

MN427928.1 ACCACGAGAC GGCGCAGCCG GCCTACCTGT TCCAGCACGC

GCCGCCGCCG

FoxO

Consensus

1001

1050

MN427928.1 CCCTACCAGC CGCAGCCGCC GCCCCCGCCG CCGCCCTACA
TGGCCGGCGC

FoxO

Consensus

1051

1100

MN427928.1 CGGGCCCTAC GCCGCCTGCC GCCTCTCGCC GTCGTACGAG
CCCGAGTCGC

FoxO

Consensus

1101

1150

MN427928.1 CGCCCACGCC GCAGCCGCAG CCGCCGCCGC
CGCCGCCCCC GCAGCCCAGC

FoxO

Consensus

1151

1200

MN427928.1 GGGCCCTCCA CCATGATGGG CCAGCTGATG GGC GCGCTCA
ACAACTCGAC

FoxO

Consensus

1201

1250

MN427928.1 GCTGCTCGAC GACCTCAACC TCAACATCGA GACGCTGCAC
GGCGGCTTCG

FoxO

Consensus

1251

1300

MN427928.1 ACTGCAACGT GGACGAGGTG ATCAAGCACG AGCTGAGCAT
GGACGGCAGC

FoxO

Consensus

1301

1350

MN427928.1 CTCGACTTCA ACTTCAGACT TCAGCCAGCA CCACCACCAC
CAGGCGATGG

FoxO

Consensus

1351

1400

MN427928.1 TGGCGGGCGG CGGCGCCATG GCGGCCGCGG
ACGGCGTGCA CCACCAGCAG

FoxO

Consensus

1401

1450

MN427928.1 CACGCGGCCG CGCAGGGCGC CGCGCCCTAC
GCCACCGGGC CCTCCTGGGT

FoxO

Consensus

1451 1460

MN427928.1 GCACTAGCCA

FoxO

Consensus