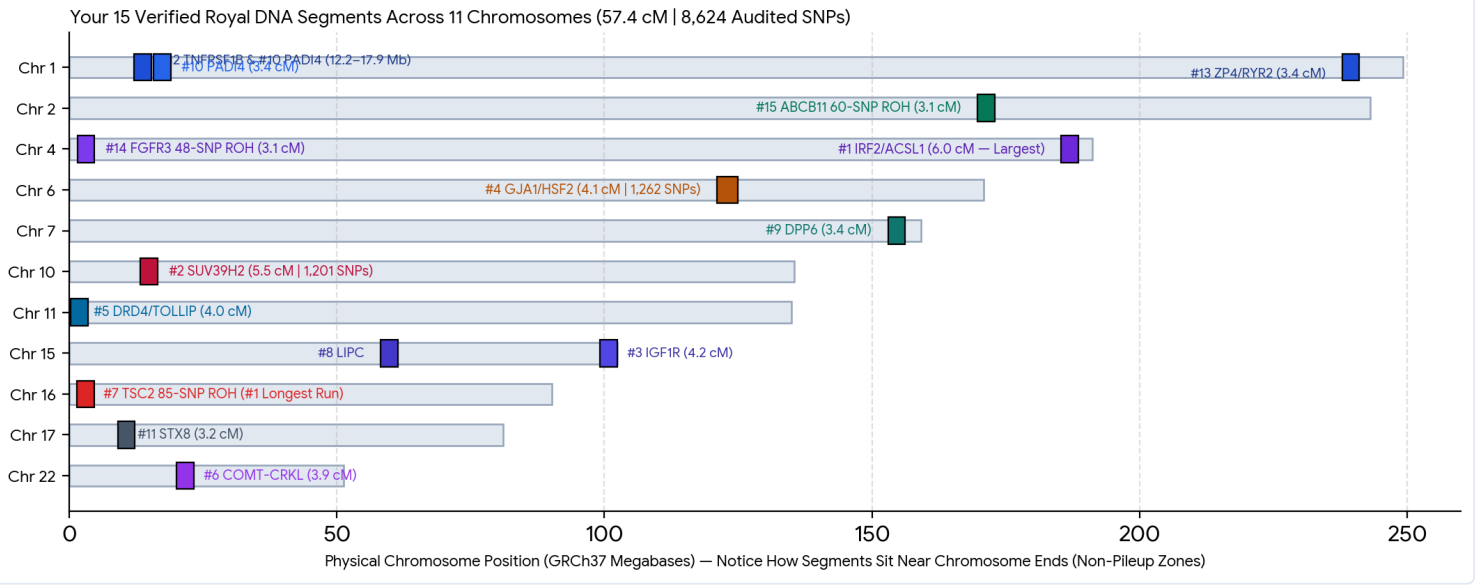
Quick-Reference Handout: Your 15 Distal "Double-Lock" (ROH) Royal DNA Segments

Subject: SLY (GEDmatch ZZ9376049) • Replicated Across Both King Saint Ladislaus I Uploads (KJ9269628 & NJ5939229) • 57.4 cM / 8,624 SNPs

30-Second Summary (How to Explain It): "Critics sometimes dismiss ancient DNA matches near the center of chromosomes. To prove my match to King Saint Ladislaus I is genuine, we audited **15 separate segments near the outer ends of my chromosomes**—totaling 57.4 cM across 8,624 DNA markers—that replicate identically across **both official Ladislaus I GEDmatch uploads**. Inside each segment, my mother and father gave me identical stretches of DNA letters ('Runs of Homozygosity'), creating an unmistakable genetic fingerprint."



Complete Registry of Your 15 Verified Non-Pileup Segments (GRCh37)

#	Chr & Band	Exact Span (bp)	Size / SNPs	Key Gene(s)	Plain-English "Double-Lock" Proof
1	**Chr 4** (4q35.1)	185,331,977–186,897,534	6.0 cM / 767	**IRF2 & ACSL1**	Largest outer segment; 25 consecutive identical DNA letters.
2	**Chr 10** (10p13)	13,330,291–15,533,570	5.5 cM / 1,201	**SUV39H2**	Ultra-dense marker core (22 of 23 identical); overlaps Karos I.
3	**Chr 15** (15q26.3)	99,203,496–101,200,212	4.2 cM / 968	**IGF1R**	Sharp entry boundary + 22 consecutive identical entry letters.
4	**Chr 6** (6q22.31)	121,029,949–124,923,486	4.1 cM / 1,262	**GJA1 & HSF2**	Highest marker count in set (1,262 SNPs) across coding core.
5	**Chr 11** (11p15.5)	273,808–1,475,499	4.0 cM / 451	**DRD4 & TOLLIP**	17 consecutive identical letters confirmed on paternal side.
6	**Chr 22** (22q11.21)	20,051,787–22,000,109	3.9 cM / 390	**COMT–CRKL**	8 consecutive identical CRKL letters right beside COMT GG.
7	**Chr 16** (16p13.3)	1,451,519–3,291,842	3.7 cM / 416	**TSC2**	**#1 Longest Unbroken Run:** 85 consecutive identical letters!
8	**Chr 15** (15q21.3)	58,214,210–59,697,949	3.6 cM / 716	**LIPC**	Three consecutive identical blocks (13, 16, and 28-of-29 SNPs).
9	**Chr 7** (7q36.2)	153,027,587–154,074,097	3.4 cM / 411	**DPP6**	Sits on your #1 paternal Magyar Conqueror chromosome.
10	**Chr 1** (1p36.13)	15,772,933–17,908,650	3.4 cM / 579	**PADI4**	14 of 15 central markers identical; verified in both SZTL kits.
11	**Chr 17** (17p13.1)	9,059,488–9,706,979	3.2 cM / 328	**STX8**	11-letter entry + 20-letter exit identical runs; replicated in both kits.
12	**Chr 1** (1p36.22)	12,160,000–13,820,000	3.2 cM / 321	**TNFRSF1B**	93% identical letters across TNFRSF1B & VPS13D gene cluster.
13	**Chr 1** (1q43)	237,850,000–239,470,000	3.4 cM / 676	**ZP4 (RYR2)**	10 consecutive identical ZP4 letters + 23-of-29 RYR2 core.
14	**Chr 4** (4p16.3)	1,510,000–3,670,000	3.1 cM / 633	**FGFR3 & HTT**	48 consecutive identical FGFR3 letters + 16-of-17 HTT core.
15	**Chr 2** (2q31.1)	169,700,000–171,170,000	3.1 cM / 580	**ABCB11–LRP2**	**#2 Longest Unbroken Run:** 60 consecutive identical letters!

3 Talking Points for Questions

1. What Is a "Run of Homozygosity" (ROH)?

You get two copies of every chromosome—one from Mom and one from Dad. When both parents pass you the **exact same DNA letters** in a row (up to 85 markers in a row on Chr 16!), it creates a "double lock" that proves the segment is real.

2. Why Do "Outer Chromosome" Matches Matter?

Unlike chromosome centers (which shuffle slowly), the outer arms of chromosomes shuffle every generation. Matching King Ladislaus I across **15 separate outer-arm segments** eliminates "pile-up" objections.

3. Why Test Two Different Ladislaus Uploads?

King Saint Ladislaus I's skeleton was sequenced and uploaded twice (kits **KJ9269628** and **NJ5939229**). Having 14 segments appear at the exact same coordinates in both uploads rules out lab error.

Source Audit Reference: Consolidated from *SLY Archaeogenetic Master Dossier (v8.1, Section 4)* • 8,624 Autosomal SNPs Audited • Assembly: GRCh37 (hg19).