

PATIENT INFORMATION

NAME: John Doe
DOB: 04/Mar/1976
SEX AT BIRTH: Male

SPECIMEN DETAILS

BARCODE: DNADUMMY2ZA
SAMPLE ID: DUMMY2
TYPE: DBS
COLLECTED: 04/Apr/2025

ORDERED BY

Private
REPORT GENERATED: 05/May/2025 (UTC)

Summary of Genetic Lab Data & Phenotypes

⊖ Attention

Clinically significant alleles were detected in the HLA genes which are associated with increased risk for severe drug-induced cutaneous adverse reactions (SCAR), including Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN), drug reaction with eosinophilia and systemic symptoms (DRESS), and maculopapular exanthema (MPE).

Allopurinol: See FDA product monograph and CPIC guideline ([doi:10.1038/clpt.2012.209](https://doi.org/10.1038/clpt.2012.209))

Carbamazepine: See FDA product monograph and CPIC guideline ([Tegretol Product Monograph, 2018](#)).

Gene	Genotype Result	Phenotype Result OR Genotype Explanation	Gene	Allele	Result	Gene	Reference	Copy Number
			HLA-A	*31:01	Positive			
			HLA-B	*15:02	Negative	CYP2D6	NG_008376.3 exon 9	2
CYP2B6	*1/*6	Intermediate Metabolizer	HLA-B	*58:01	Positive			
CYP2D6	*2.019/*4.001	Intermediate Metabolizer	HLA-B	*57:01	Negative	CYP2D6_3pFl ank	NG_008376.3 CYP2D6_3pFl ank	2
CYP2C9	*1/*1	Normal Metabolizer				CYP2D6_5pFl ank	NG_008376.3 CYP2D6_5pFl ank	2
CYP2C19	*1/*17	Rapid Metabolizer						
CYP3A4	*1/*1	Normal Metabolizer						
CYP3A5	*3/*3	Poor Metabolizer						
DPYD	*1/*1	Normal Metabolizer						
G6PD	B (reference)/B (reference)	Normal						
NUDT15	*1/*1	Normal Metabolizer						
SLCO1B1	*1/*1	Normal Function						
TPMT	*1/*1	Normal Metabolizer						
UGT1A1	*1/*1	Normal Metabolizer						

This is a short summary of the full medication report. The patient’s results are now accessible within the clinical decision support software, TreatGx and ReviewGx, and can be used with other clinical information to enable precision prescribing and medication management. The final genotype/phenotype call is at the discretion of the laboratory director. Medication changes should only be initiated at the discretion of the patient’s healthcare provider after a full assessment.

The Medication Summary lists medications with pharmacogenetic associations, organized by therapeutic area and drug-gene interaction severity. Some medications have several numbered superscripts within moderate drug-gene interactions (see Legend) due to various possible effects or associations with multiple genes. The highest severity is prioritized (moderate/severe) from all relevant sources and genes for a medication.

Warfarin has multiple possible effects because its dosing cannot be predicted based on PGx alone and other factors may increase or reduce dose requirement. See Medication Report for full details.

⚠ Serious drug-gene interaction: avoid/select alternative

Analgesia

Carbamazepine

Mental Health

Carbamazepine

Other

Eliglustat

PATIENT INFORMATION

NAME: John Doe
DOB: 04/Mar/1976
SEX AT BIRTH: Male

SPECIMEN DETAILS

BARCODE: DNADUMMY2ZA
SAMPLE ID: DUMMY2
TYPE: DBS
COLLECTED: 04/Apr/2025

ORDERED BY

Private
REPORT GENERATED: 05/May/2025 (UTC)

Infection

Voriconazole

Neurology

Carbamazepine

Rheumatology

Allopurinol

🚩 Moderate drug-gene interaction

Analgesia

Alfentanil²
Amitriptyline^{1,5,6}
Desipramine^{2,6}
Fentanyl^{2,5}
Imipramine^{1,5,6}
Lamotrigine⁶
Morphine²
Nortriptyline^{2,6}

Gastroenterology

Dexlansoprazole^{3,5}
Lansoprazole^{3,5}
Meclizine^{2,5,6}
Methotrexate⁶
Omeprazole^{3,5}
Pantoprazole^{3,5}
Prochlorperazine⁶
Promethazine⁶

Mental Health

Citalopram^{1,3,5}
Clomipramine^{1,5,6}
Clozapine⁶
Desipramine^{2,6}
Doxepin^{1,5,6}
Escitalopram^{1,3,5}
Flupentixol⁶
Fluphenazine⁶
Fluvoxamine⁶
Haloperidol⁶
Iloperidone⁶
Imipramine^{1,5,6}
Lamotrigine⁶
Loxapine⁶
Lurasidone⁶
Methotrimeprazine⁶
Methylphenidate⁵
Molindone⁶
Nortriptyline^{2,6}
Olanzapine^{5,6}
Paliperidone⁶
Paroxetine^{2,6}
Perphenazine⁶

Mental Health

Pimozide⁶
Quetiapine⁶
Risperidone^{5,6}
Thioridazine⁶
Thiothixene⁶
Trifluoperazine⁶
Trimipramine^{1,5,6}
Vortioxetine⁶
Ziprasidone⁶
Zuclopenthixol^{2,6}

Autoimmune

Cyclosporine²
Methotrexate⁶
Tacrolimus³

Infection

Efavirenz^{2,6}
PEG-interferon alpha⁵

Mental Health

Amitriptyline^{1,5,6}
Aripiprazole⁶
Aripiprazole lauroxil⁶
Asenapine⁶
Atomoxetine^{3,5}
Brexipiprazole⁶
Bupropion⁵
Cariprazine⁶
Chlorpromazine⁶

Cancer

Methotrexate⁶
Tamoxifen^{1,3,5}

Cardiovascular

Flecainide^{2,5,6}
Propafenone^{1,2,5,6}
Warfarin^{2,3,5,6}

Neurology

Amitriptyline^{1,5,6}
Lamotrigine⁶

Rheumatology

Methotrexate⁶

Urology

Sildenafil⁵

Legend

¹Consider alternative medications

²May require a reduced dose

³May require an increased dose

⁵May reduce efficacy

⁶May increase adverse events

● Mild or no known drug-gene interactions

Analgesia

Carisoprodol
Celecoxib
Codeine
Flurbiprofen
Hydrocodone
Ibuprofen
Meloxicam

Cardiovascular

Acetylsalicylic acid
Atorvastatin
Carvedilol
Clopidogrel
Fluvastatin
Lovastatin
Mavacamten

Mental Health

Bromazepam
Chlordiazepoxide
Clonazepam
Clorazepate
Diazepam
Fluoxetine
Flurazepam

Other

Abrocitinib
Avatrombopag
Cevimeline
Elagolix
Eltrombopag
Flibanserin
Lusutrombopag

PATIENT INFORMATION

NAME: John Doe
DOB: 04/Mar/1976
SEX AT BIRTH: Male

SPECIMEN DETAILS

BARCODE: DNADUMMY2ZA
SAMPLE ID: DUMMY2
TYPE: DBS
COLLECTED: 04/Apr/2025

ORDERED BY

Private
REPORT GENERATED: 05/May/2025 (UTC)

Oliceridine
Oxcarbazepine
Piroxicam
Tenoxicam
Tramadol
Venlafaxine

Metoprolol
Nebivolol
Pitavastatin
Pravastatin
Propranolol
Rosuvastatin
Simvastatin

Lofexidine
Lorazepam
Nicotine replacement therapy
Nitrazepam
Oxazepam
Oxcarbazepine
Protriptyline
Sertraline
Temazepam
Triazolam
Venlafaxine
Viloxazine

Methylene blue
Oral contraceptives

Anesthesia

Desflurane
Isoflurane
Methoxyflurane
Sevoflurane
Succinylcholine

Endocrinology

Nateglinide

Gastroenterology

Dronabinol
Esomeprazole
Metoclopramide
Ondansetron
Rabeprazole

Neurology

Brivaracetam
Clobazam
Clonazepam
Deutetrabenazine
Diazepam
Donepezil
Fosphenytoin
Galantamine
Metoprolol
Oxcarbazepine
Phenytoin
Pitolisant
Propranolol
Tetrabenazine
Valbenazine
Venlafaxine

Respiratory

Salmeterol

Rheumatology

Azathioprine
Celecoxib
Etanercept
Flurbiprofen
Ibuprofen
Meloxicam
Pegloticase
Piroxicam
Rasburicase
Tenoxicam

Autoimmune

Azathioprine
Etanercept
Mercaptopurine
Siponimod
Thioguanine

Infection

Abacavir
Atazanavir
Dapsone
Nitrofurantoin
Primaquine
Tafenoquine

Urology

Darifenacin
Fesoterodine
Mirabegron
Tamsulosin
Tolterodine

Cancer

Capecitabine
Erdafitinib
Fluorouracil
Gefitinib
Irinotecan
Mercaptopurine
Pazopanib
Thioguanine

Mental Health

Alprazolam
Amoxapine
Amphetamine

Limitations

The annotations and interpretations provided in this report are based on scientific literature and do not take into account drug-drug interactions, medical conditions or other clinical factors that may affect medication response. Gene-drug interactions are ranked according to guidelines, level of evidence and clinical utility. GenXys reports and TreatGx Clinical Decision Support are regularly updated. Current predicted phenotype and allele functionality may change in the future depending on new evidence. Phenotype annotations for CYP2C9 are based on total activity scores as defined by CPIC⁷⁹. Genetic test results and interpretation may be inaccurate for individuals who have undergone or are receiving non-autologous blood transfusion, tissue, or organ transplant therapies.

The report includes alleles of proteins involved in the metabolism of many medications. In rare cases, a variant that is not covered may be typed as *1 or other variants. In the case of pseudogenes and mutations in the untranslated regions of genes, incorrect allele typing may occur despite proper SNP detection. Preferential amplification of one allele over another present in the sample may also lead to incorrect genotyping.

Liability Disclaimer

This test was developed and its performance characteristics determined by GenXys Health Care Systems. It has not been cleared or approved by the US Food and Drug Administration. The report is not a diagnostic test, and TreatGx is not a prescribing system. You should discuss your pharmacogenetic information with a physician or other health care provider before you act upon the pharmacogenetic information resulting from this report. The medication brand names are not an exhaustive list and do not include combination therapies. Not all medications in this report are included in the TreatGx or ReviewGx software or other GenXys derivative works.

PATIENT INFORMATION

NAME: John Doe
DOB: 04/Mar/1976
SEX AT BIRTH: Male

SPECIMEN DETAILS

BARCODE: DNADUMMY2ZA
SAMPLE ID: DUMMY2
TYPE: DBS
COLLECTED: 04/Apr/2025

ORDERED BY

Private
**REPORT
GENERATED:** 05/May/2025
(UTC)



Dr Danny Meyersfeld, Laboratory Director, PhD

05/May/2025 (UTC)

Date of Signature