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### **DUPM**

Broadcast logical bitmask immediate to vector (unpredicated)

Unconditionally broadcast the logical bitmask immediate into each element of the destination vector. This instruction is unpredicated. The immediate is a 64-bit value consisting of a single run of ones or zeros repeating every 2, 4, 8, 16, 32 or 64 bits.

This instruction is used by the alias MOV.

```
31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 0 0 0 0 0 1 0 1 1 1 0 0 0 0 0 imm13 Zd
```

```
DUPM <Zd>.<T>, #<const>
```

```
if ! HaveSVE() && ! HaveSME() then UNDEFINED;
constant integer esize = 64;
integer d = UInt(Zd);
bits(esize) imm;
(imm, -) = DecodeBitMasks(imm13<12>, imm13<5:0>, imm13<11:6>, TRUE, esi
```

### **Assembler Symbols**

<Zd>

Is the name of the destination scalable vector register, encoded in the "Zd" field.

<T>

Is the size specifier, encoded in "imm13<12>:imm13<5:0>":

imm13<12>	imm13<5:0>	<t></t>
0	0xxxxx	S
0	10xxxx	Н
0	110xxx	В
0	1110xx	В
0	11110x	В
0	111110	RESERVED
0	111111	RESERVED
1	XXXXXX	D

<const>

Is a 64, 32, 16 or 8-bit bitmask consisting of replicated 2, 4, 8, 16, 32 or 64 bit fields, each field containing a rotated run of non-zero bits, encoded in the "imm13" field.

#### **Alias Conditions**

Alias	Is preferred when
MOV	<pre>SVEMoveMaskPreferred(imm13)</pre>

# **Operation**

```
CheckSVEEnabled();
constant integer VL = CurrentVL;
bits(VL) result = Replicate(imm, VL DIV esize);
Z[d, VL] = result;
```

# **Operational information**

If FEAT\_SVE2 is implemented or FEAT\_SME is implemented, then if PSTATE.DIT is 1:

- The execution time of this instruction is independent of:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.
- The response of this instruction to asynchronous exceptions does not vary based on:
  - The values of the data supplied in any of its registers.
  - The values of the NZCV flags.

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